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ABSTRACT

A study examined student achievement in selected Edison schools through an analysis of test-score data. To qualify for the study, each school had to be in operation for more than 1 year and had to have solid student testing data from a solid evaluation design. Eight schools were selected, and their reading data were compared with those of comparable public schools. Overall the Edison results were mediocre, small to moderate, or not statistically significant. Generally, the results are not as good as the results for an average fully implemented Success for All program. Edison schools do use the Success for All reading program, operate with a longer school day and year, and offer a full-time kindergarten with an academic program. However, the Success For All program is only partially implemented, half the teachers have less than 5 years of experience, teacher turnover is 25 to 40 percent, and the class size averages 28 students. The number of free-lunch students is declining. By limiting enrollment and having waiting lists, the schools' management keeps costs down. In addition to local and state funding, investors fund technology, consultants, and staff development. Edison has a national reputation and excellent funding, but it may not be living up to its claims. (Contains 21 references.) (RKJ)

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Research Report

Student Achievement in Edison Schools: Mixed Results in an Ongoing Enterprise

American Federation of Teachers

Spring 1998

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Research Report

Student Achievement in Edison Schools: Mixed Results in an Ongoing Enterprise

American Federation of Teachers

Spring 1998

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This report and supporting materials are posted on the web (http://www.aft.org/research/edisonproject/index.htm). Updates will be posted as new data appear.

Marcia Reecer, Ph.D., and Bella Rosenberg contributed extensively to revisions of this report and Doug Ross helped prepare the final manuscript.

Preface

The Edison Project is the creation of media entrepreneur Christopher Whittle. Whittle's original plan for the Edison Project was to establish 1,000 for-profit private schools. A series of setbacks forced Whittle and his fellow investors to settle on a scaled-back plan that would use school district funds to operate a much smaller number of public schools. Whittle now hopes to open 200 public schools that will receive the same per-pupil spending as traditional public schools, yet still yield a profit.

Edison spent an estimated $40 million developing its program before its first school opened for business, and news accounts have reported that Edison has invested more than $100 million in its schools. Edison's pitch to prospective school districts makes several attractive claims: Its program will raise student achievement for the same per-pupil expenditure as other district schools; provide a longer school day and year; and supply a home computer for the family of nearly every student in an Edison school.

The AFT has followed the Edison Project since its inception, and AFT leaders and staff leadership have engaged in an ongoing dialogue with Edison for several years. Christopher Whittle has addressed the AFT Executive Council and policy councils. And AFT affiliates in two locations have negotiated contractual waivers with Edison, smoothing the way for Edison to operate schools in those districts. In fact, leaders of the United Teachers of Dade successfully lobbied for Edison when a new school board member attempted to terminate the Edison contract after one year of operation.

Not all of AFT affiliates' dealings with Edison have been harmonious, however. The Duluth Federation of Teachers has met with Edison officials and visited Dade-Edison, but was not successful in resolving union concerns. Edison opened two charter schools in Duluth in fall 1997.

In 1995, Edison opened four elementary schools: in Boston, Massachusetts; Wichita, Kansas; Mount Clemens, Michigan; and Sherman, Texas. In 1996, four more elementary schools opened: in Dade County, Florida; Colorado Springs, Colorado; Worcester, Massachusetts; and Lansing, Michigan. And this past fall, Edison opened elementary schools in Chula Vista, California; Detroit, Michigan; Duluth, Minnesota; Flint, Michigan; Southwest Independent School District--a small district on the outskirts of San Antonio, Texas--and an additional school in Wichita. Edison also operates middle schools in Wichita, Sherman, Mt. Clemens, Boston, Worcester, Lansing, and Duluth. The company currently operates 25 schools.

Overview of Edison Project Sites 1997-98

Sites:	School Name:	Schools/Date Opened	# Students*	Size/% School District (1993)	Charter or Contract
Boston, MA	Boston Renaissance; Boston Middle	1 ES (95); 1 MS (96)	660 ES; 418 MS	62,407: 1.5%	charter
Chula Vista, CA	Feaster Elementary	1ES (97)	1,007	18,240: 18%	charter
Col. Spring, CO	Roosevelt Elem.; Emerson MS	1 ES (96); 1 MS (97)	674 ES; 138 MS	32,024: 2.6%	charter
Dade County, FL	Reeves Elem.	1 ES (96)	1,069	303,346: .4%	contract
Detroit, MI	Detroit Academy of Arts and Science	1 ES (97);	705	172,330: .4%	charter
Duluth, MN	Edison-Central Jr. Academy; Edison-Kenwood Primary Elem.	1 ES (97); 1 MS (97)	322 ES; 202 MS	14282: 4.6%	charter
Flint, MI	Garfield-Edison Partnership School; Williams-Edison PS.	2 ES (97)	476 ES; 497 ES	26,615: 2.6%	contract
Lansing, MI	Mid-Michigan Public School Academy; Mid-Michigan Jr. Academy	1 ES (96); 1 MS (97)	696 ES; 272 MS	20,851	charter
Mt. Clemens, MI	MLK Jr. Academy; Mt. Clemens Jr. Ac.; Mt. Clemens Sr. Ac.	1 ES (95); partial MS (96); partial HS (97)	554 ES; 347 MS; 122 HS	3,356. 25.6%	contract
Sherman, TX	Washington Elem.; Dillingham MS	1 ES (95); partial MS (96)	460 ES; 300 MS	5,893: 13.4%	contract
Southwest ISD, San Antonio, TX	Elm Creek Elem.	1 ES (97)	561	8,462: 6.4%	contract
Wichita, KS	Dodge-Edison ES; Jardine-Edison MS; Edison Ingalls-Isley PS	1 ES (95); 1 MS (96); 2 ES (97)	637 ES; 924 MS; 684 ES; 293 ES	47,810: 3.1%	contract
Worcester, MA	Seven Hills Charter School	1 ES (96); 1 MS (97)	448 ES; 216 MS	21,404: 2.5%	charter

* Edison Project Student Enrollment Report, 12/5/97.

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Executive Summary

The Edison Project offers a mixture of appealing features, some backed by solid evidence of educational efficacy and others not. There is also evidence of some demographic and financial advantages that are not an acknowledged part of Edison's financial package but are nonetheless significant. All told, there are certain features of the Edison Project that would predict success in raising student achievement.

In contrast, there are certain features of the program, as implemented, that might undermine Edison's success. Chief among them are departures from the recommended implementation of Success for All, reliance on novice teachers, high teacher turnover, and large class size.

1. Potential advantages of the Edison program

- In its elementary schools, Edison relies heavily on Success for All (SFA), a successful and widely admired reading program designed to raise student achievement in low-performing schools with high concentrations of disadvantaged children. SFA was developed by researchers at Johns Hopkins University and is now used in approximately 500 schools throughout the U.S. It includes daily 90-minute reading periods in small groups of like proficiency, extensive one-on-one tutoring in the early grades, family support services, and a number of specific staffing and staff development components.

- Edison expands the time students spend in school with a longer school day and school year and a full-time kindergarten that has an academic program. Though these enhancements are attractive and popular, their educational effectiveness has not been solidly established. However, some studies have found benefits in a good, full-day kindergarten program, and if more time in school means more time on task, a longer school day and school year also might be expected to improve student achievement.

- Edison charter schools are, in effect, magnet schools. The parent and student choice that such schools entail is often a proxy for highly motivated parents; and that characteristic, in turn, can be expected to show up in improved student achievement. The same is true, to a lesser extent, of the so-called partnership schools, which Edison manages under contract with school districts. In those schools, some out-of-boundary students who wish to enroll are permitted to do so, thus creating a "neighborhood magnet."

  Magnet schools also can exercise some degree of selectivity, which probably explains the consistent decline in the number of free-lunch students in many of the Edison schools for which we have data.[1] Since there is strong correlation between student achievement and socioeconomic status, fewer poor children at Edison schools would probably increase the likelihood of higher test scores.

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[1] The proportion of students eligible for free or reduced-price lunch in Edison elementary schools has fallen from 76 to 69 percent in Wichita, from 70 to 64 percent in Sherman, Texas, from 54 to 44 percent in Colorado Springs, from 64 to 50 percent in Boston, and from 59 to 48 percent in Mt. Clemens, Michigan.

Being able to enroll out-of-boundary students also allows Edison to fill every seat by limiting enrollment and admitting students from waiting lists. The company can thus make the most economical possible use of the school staff and facilities.

- The first Edison schools have not, in fact, had to make do with the same per-pupil expenditures as other public schools. Although Edison schools probably got approximately the same local and state funding as similar local schools, most received additional funds from Edison investors for technology, consultants and staff development, and, sometimes, other expenses. Some schools, such as the Boston charter school, have benefitted from substantial private donations. In fact, Edison has a person on staff to assist schools in raising contributions from outside sources.

2. Potential shortcomings of the Edison program

- The effectiveness of Success for All has been threatened by the company's failure to carry out the program as developed by SFA researchers. Though reading tutors are central to SFA's success, Edison has yet to provide the number of tutors that SFA calls for in high-poverty schools, and it spreads reading tutors over all grade levels, from kindergarten through grade five, instead of concentrating them in kindergarten through grade two where, SFA researchers have found, they are most effective. (That may account for the lackluster performance of the Dade County school in 1996-97 in comparison with that of the Edison school in Wichita, where SFA was fully implemented.) Also, except for Dade County, beginning in 1997, Edison does not employ the full-time SFA coordinator in each school, even though the program insists this is necessary in order to ensure quality control.

- Edison relies heavily on relatively inexperienced teachers. Typically, half of the teaching force has fewer than five years of experience, in comparison with the national average of 16 years.

- Teacher turnover rates in Edison schools are high. The company admits to a 23 percent turnover rate, which is twice the national average for urban public schools. At some of the Edison schools, turnover is 25 to 40 percent in a single year, as much as triple the public-school average nationwide.

- Class size also tends to be high. With the exception of the small reading groups required by Success for All, the average is in the neighborhood of 28 students per class. In some of the Edison schools, this is no higher than the school-district average. However, the national norm is 24 students, and most experts now agree that elementary school students, particularly poor children, benefit from a class size of 15 to 17.

3. Edison's Primary Reading Studies. Edison commissioned Robert Mislevy, a distinguished researcher, to do reading achievement studies of students in grades K-3. The design of these studies was modeled on the standard evaluation used with Success for All programs. Mislevy carried out his study in Edison elementary schools in Wichita, Kansas; Mt. Clemens, Michigan; Sherman, Texas; and Colorado Springs, Colorado. (He also conducted a reading study at Edison's Boston charter elementary school. However, it had no control group and so is not included in our analysis.)

On the whole, Edison results were mediocre. Kindergarten students were the most successful in comparison with control-group students. However, this is not surprising given the fact that Edison runs full-day kindergartens with an academic program and the schools attended by control-group schools did not.

Edison first graders did much less well. Students at Wichita performed somewhat better than students in the control groups--the effect size was small to moderate. In Mt. Clemens, the differences were generally not statistically significant. Furthermore, since no initial achievement data were collected, it is not possible to compare Edison students with control group students, so test results are inconclusive anyway. At Sherman, the Edison Program showed no effect--that is, there was no difference in test results between Edison students and students in the control group. At Colorado Springs, results were not good but should probably be considered inconclusive because of insufficient data and problems in matching control group students with children attending the Edison school.

Edison shows no signs of continuing the Primary Reading Studies at either Sherman or Colorado Springs, so we are unlikely to find out if the students in these schools would have gone on to match the achievement levels of youngsters at Wichita and Mt. Clemens.

4. Success for All results compared with Edison's. Mislevy's evaluations compared scores for Edison elementary school students in Wichita, Mt. Clemens, Sherman, and Colorado Springs with scores for control group students. However, if you also compare Edison scores with scores on a national SFA study carried out by the researchers who originated the program, Edison's results are much less impressive. Generally, they are not as good as the results for an average, fully-implemented SFA program. It should be noted that the great majority of SFA programs are located in public schools that serve poor, minority communities and that student populations in these schools are, on average, more disadvantaged than student populations in Edison schools.

5. Other elementary and middle school results

- The results for Wichita students in grades 3 to 5 are contradictory. Over a two-year period, student achievement, as measured by MAT/7, a standardized test of reading and writing administered by the school district, has improved dramatically and puts Edison's Wichita school well ahead of most comparable schools. In stark contrast, however, the Kansas State Assessment shows that Edison students have fallen behind students in comparable schools.

- After one year of operation, the middle school in Wichita, unlike the more successful Edison elementary school in Wichita, demonstrated no gains on the MAT/7 tests or the Kansas state assessments.

- Over two years, the Texas state assessments show that third- and fourth-grade students in Sherman have suffered substantial declines in their math scores and third graders in their reading scores.

- Results in the Sherman middle school are inconclusive because we lack the data to interpret them.

- First-year data for Mt. Clemens students in grades three to five show little overall improvement on state assessments, and after two years, standardized test scores improved only a small amount.

- In the Boston charter school, scores for students in grades 3, 4 and 5 have shown improvement on MAT/7 tests, though there were irregularities in the way Edison admininstered the tests. On the state assessments, third graders scored at the 45th percentile in reading, in contrast to the 60th percentile score the same students received on the MAT/7 the following fall. (It is unheard of for students to register an achievement gain like this over the summer.)

- In Dade County, an early evaluation conducted by the school district concluded that Edison students in grades 1 to 6 are doing as well in reading as comparable students in the district, but they have fallen behind in math.

- Early results in Colorado Springs indicate that students in grades 3 to 5 did not improve in the school district's standardized test of reading, math, and language as much as either other third to fifth graders in the district or third to fifth graders in prior years when the school was not run by Edison.

6. Recommendations. As one might expect at this early stage in the history of the Edison Project, the evidence on student achievement is mixed and inconclusive. However, two things are clear. There are discrepancies between the record of Edison schools, as measured by standard methods of educational evaluation, and the company's sales presentations and promotional materials. Edison has exaggerated test score gains and emphasized favorable comparisons in order to show Edison schools in the most positive light. In fact, if public schools were to use some of Edison's evaluation methods and modes of presenting data, they would look a lot better, too.

This is unacceptable. Edison should be expected to measure achievement in its schools using the same standards that apply to other schools in the districts where the company operates. Despite its claims to being a better alternative to regular public schools and a model for public education, Edison is obviously confronting the same difficulties in improving student achievement as regular public schools.

Although accountability for the outcomes of private management of a public institution, like a school, rests with the private provider, the ultimate responsibility is with public officials whose duty it is to protect the public interest. Private management of public schools requires good public oversight, both before entering into an agreement with a private provider and during it. To that end, there are a number of things school districts that are considering hiring the Edison Project should keep in mind:

- Improving student achievement is at the heart of all the many efforts to improve U.S. education, including Edison's. So school districts should pay at least as much attention to Edison's student achievement data as they do to impressions from site visits to Edison schools.

- School districts should have their own experts--*district* officials in charge of program evaluation and student assessment--review and verify all student achievement data in all of the Edison schools. This review should be made public and should include not only Edison-administered achievement tests but also state and local assessments.

- School districts considering hiring Edison should have a timeline that is unhurried enough so that everyone involved can give careful attention to the advantages and disadvantages of Edison before making a decision.

- If a school district decides to sign a contract with Edison, officials should either hire independent professional evaluators or conduct their own annual evaluation of program implementation and student achievement using qualified school-district employees.

In her article about Edison's Boston charter school, which appeared in the March 1998 issue of *Phi Delta Kappan,* Peggy Farber puts the Edison Project into its perspective as a business venture and as one struggling school reform project among many. She directs her caveats to members of the media, but they are equally applicable to school districts:

> It is not reasonable to expect the Edison Project to present the public--its potential customers--with a truly comprehensive, objective picture of its schools. Edison officials are naturally eager to draw attention to signs of success, which clearly exist. But it is essential, especially now, when the idea of a single solution to complex social problems has such a strong grip on the American imagination, that reporters give an honest and thorough accounting of what it's like inside schools that operate beyond the reach of almost all local and state agencies. The evidence from Boston Renaissance suggests that the Edison Project is struggling--succeeding in some areas, stumbling in others--to improve schools for students. And the same can be said for countless reform efforts across the country.

To a large extent, Edison's popularity depends on the perception that public schools are dysfunctional and helpless to change and that anyone with a fix to offer must be able to do better. Before buying into this idea, public officials and the people who report and comment on education should look at some of the reform efforts that are demonstrably--that is, using accepted measures --changing public schools for the better. This report will comment on one of them--Success for All--and to point out that, thus far, Edison students who are following the SFA program are not doing as well as SFA students in non-Edison schools where SFA is fully implemented. This is true despite the fact that Edison students are generally more advantaged and have the benefit of the rest of the Edison program.

The point is that Edison is one reform effort among many. Its more polished public relations have ensured it a national reputation, and since it is a for-profit business, it also has more money behind it. Will the Edison Project be able to live up to its promises? We'll have to wait and see. In the meantime, there are unheralded programs that are already living up to their claims, and people who are looking for ideas--or good news about education--should be giving them the same kind of attention that Edison gets.

I. Why This Study?

When Edison Project representatives pitch the company's program to school districts, they offer a very attractive-sounding package: a longer school day and school year; a home computer for the family of nearly every student; a full-day kindergarten with an academic program; and a strong curriculum--all of which, they say, will lead to documented and significant improvements in student achievement. The price appears to be right, too. Far from requiring a big financial commitment, Edison promises that it will provide its program for the same per-pupil spending as regular public schools--with enough left over to yield a profit for investors.

When school districts first contracted with Edison, they had to do so largely on the basis of the company's plans and promises. Now, there are two years of data from the four schools Edison opened in fall 1995 and early results from schools that opened in fall 1996. What do the data indicate?

Although Edison rightly cautions against expecting too much too soon, the company also makes ambitious claims about the success of its program, based, it says, on these early results. Its 1997 annual report on school performance speaks of "a broad trend of significant improvement" and says that the Edison program is improving achievement for 70 percent of students and failing with only 5 percent, with differences for the other 25 "not large enough to draw firm conclusions." (http://www.edisonproject.com/annualframe.html) Benno Schmidt, the president of the Edison Project, calls the results: "uniformly positive...where we can compare the achievement of Edison students to similar students in other public schools or measure the current performance of Edison students against their past achievement."

But though Schmidt invokes the kinds of comparisons needed for an objective assessment of how well Edison is doing, few independent studies of results in Edison schools exist. Except for the limited evaluations of the Success for All program in four schools conducted by Robert Mislevy of the Educational Testing Service and a school district evaluation in Dade County, no independent evaluations of Edison schools are being carried out or, apparently, are planned. And there are no independent studies analyzing and synthesizing the available data on the 12 Edison schools that had been in operation for at least a full school year at the time this report was compiled. So those interested in following the progress of the Edison enterprise have had to fall back on the company's promotional materials and its rather skimpy and selective analyses of student achievement data.

This report aims to offer a solid and comprehensive basis for evaluating Edison's progress thus far by gathering together and analyzing the available student achievement data from all the Edison schools. And since, unlike other studies, it integrates data for all of the achievement measures used in assessing Edison schools, it can provide a framework for future evaluations.

II. How We Did This Study

This study focuses almost exclusively on student achievement in selected Edison schools through an analysis of test score data. It does not deal with student or parent or teacher satisfaction, nor does it contain information gathered from school visits. These perspectives are important, but we prefer to focus on the bottom line of student achievement because that *is* the bottom line and because interest in the Edison Project turns primarily on its capacity to improve student achievement, particularly in relation to regular public schools. Moreover, penetrating test score data or claims is often a difficult business for the public and policymakers and even for some school administrators; the more sources of analysis they have, in addition to the reports provided by Edison, the better their understanding and decisions can be.

This focus on student achievement determined our criteria for which of the 25 existing Edison schools (as of the 1997-98 school year) to examine. The first criterion was track record, that is, how long the school was in operation. The second, related criterion was solidity of student testing data and evaluation design. Those criteria excluded the 13 Edison schools opened in 1997. Although there are certainly impressions to be gleaned from a first or single year of a school's operation, it would be premature for us (or Edison) to draw conclusions about student achievement after only one year.

Conversely, those criteria led us to focus primarily on the four elementary schools Edison opened in 1995-96 in its first year of operation: the Dodge-Edison school in Wichita, Kansas; Martin Luther King, Jr. Academy in Mt. Clemens, Michigan; Washington Elementary School in Sherman, Texas; and Boston Renaissance in Boston, Massachusetts. We also examined the eight schools Edison opened in 1996-97, its second year of operation. These newer schools were automatically less solid candidates on the criterion of track record, but Edison includes them in their most recent report, so we examined their student test data and evaluation designs (our second criterion) to see if they allowed a solid or promising early assessment of student progress; if they did, we included the schools in our student achievement analysis.

This examination of the eight schools opened in 1996-97 yielded four schools that met the criterion: Roosevelt Elementary in Colorado Springs, Colorado; Dillingham Middle School in Sherman, Texas; Jardine-Edison Middle School in Wichita, Kansas; and Reeves Elementary in Dade County, Florida. We did not, however, conduct an analysis of student achievement in Reeves/Dade because the school district is already doing so using an evaluation design that we believe is consistent with the evaluation principles enunciated later in this chapter. Instead, we report some results from the school district's preliminary evaluation. Analyses of student achievement in the other three schools are included in our report.

The schools that receive little of our attention are Seven Hills Charter School in Worcester, Massachusetts; Mid-Michigan Public School Academy in Lansing, Michigan; Mt. Clemens Junior Academy in Mt. Clemens, Michigan; and Boston Middle School in Boston, Massachusetts. The chief reason is the inadequacy of their baseline for measuring student achievement. Baselines for these schools were established using spring testing data, almost a year after the schools opened, which means that the Edison program had had nearly a full year's impact on student achievement. Thus, although there are student testing data, without a proper baseline, it is difficult to tell what these data mean (and what future data will mean). We offer a fuller discussion of the baseline data issue later in this section.

Three of the four schools in the above category are also charter schools. And, in general, charter schools get less attention in our report because they fall short on our second criterion, solidity of evaluation design and student testing data. In the case of charter schools, the typical evaluation problem is that there are no comparison schools or students. Combined with the potential for student selection bias and/or the self-selection of parents, determining a program effect with any confidence is very difficult

.

In sum, then, our report offers student achievement analyses for eight Edison schools (including the school district evaluation in Dade County) and focuses most heavily on the four schools in this group with the longest track record of operation -- Edison's debut schools. Other schools may be mentioned in a context relevant to student achievement, but if we did not have data or data that met our criteria, we could derive little about student achievement.

1. Primary Reading Studies. The four Edison schools we focus on most heavily also received special scrutiny from Edison. Edison contracted with Robert Mislevy, a distinguished statistician, to conduct "Primary Reading Studies" modeled after the highly regarded evaluation design used to ascertain student achievement in Success for All elementary school programs. (Note: Although Mislevy works for the Educational Testing Service, his work for Edison was not done under its auspices.) Success for All also happens to be an important component of Edison's own elementary school program, so the evaluation model for the Primary Reading Studies offered a particularly good fit.

Our report discusses the results of Mislevy's Primary Reading Studies and extends them further by offering comparisons between the Edison schools and Success for All results in regular public schools. However, our analysis of the Primary Reading Studies excludes Boston Renaissance, one of the original four Edison schools, because the study had no control group. Without a control group, no program effect can be determined, so the Boston study is rarely discussed in this report. We do, however, discuss the only Primary Reading Study conducted in the second batch of schools opened by Edison (1996), and that is in Roosevelt Elementary in Colorado Springs. All told, then, our analysis of the Primary Reading Studies is limited to Dodge-Edison/Wichita; Martin Luther King, Jr. Academy/Mt. Clemens; Washington Elementary/Sherman; and Roosevelt Elementary/Colorado Springs.

2. Other data sources and data displays. Our study follows the principle of multi-indicator analysis of student achievement, that is, using as many sound sources of student achievement data as is possible. We therefore report both test scores and gains in test scores and, whenever possible, compare Edison school test results to home district test score averages, state averages and results in comparable schools.

Edison might argue that the only relevant measure is gain in test scores. We agree that gains are a relevant measure, but so are the other components of multi-indicator assessment. Moreover, since Edison generally declares that it will be held accountable for performance on all state and local assessments--and because regular schools are examined and held to account on this basis--a multi-indicator analysis offers school districts the kind of information they are accustomed to and need.

To further encourage readers to examine student achievement from a variety of perspectives, we generally present all testing data for all grades in all years, which Edison usually does not. Readers may then either follow a single cohort of students over time from one grade to the next, which is the predominant way Edison displays data, or they may compare progress at a single grade level from one cohort to another, which is the way student achievement comparisons are usually conducted; district, state and federal Title I assessment reports almost always compare progress at a single grade level over time, and this is how national and state assessment norms are established.

3. Baselines. The choice of baseline for measuring progress in student achievement is a critical one. Typically, when trying to determine the effect of a program, the choice of baselines focuses on identifying the point in time when the program has least affected the student. The ideal baseline would be an individual student test score from the spring immediately preceding the introduction of a new program, which in schools is typically the fall. A very poor--indeed, in our judgment, unacceptable--baseline would be scores from tests taken in the spring *after* the program was introduced because that program would have had nearly a full school year's impact on lowering or raising student achievement. Subsequent evaluations would then be comparing the effects of program X to program X, rather than the effects of program X to pre-program X.

Unfortunately, good baselines are not always available for Edison schools. As discussed earlier, our analysis did not fully treat four second-year Edison schools because their baseline student achievement data were constructed from tests taken in the spring after conversion to an Edison school. Again, the ideal baseline would be student test scores from the spring immediately preceding enrollment in an Edison school.

An alternative is a baseline of test scores from the early fall of the first year of conversion to (or enrollment in) an Edison school, but that baseline has serious shortcomings. New schools are often chaotic, and the students may not be prepared to take an early fall test. Moreover, teachers and administrators are aware that the test is only for the purpose of establishing a baseline for progress and that no one will be held accountable for the results; the test doesn't "count." And while other schools in the district are being held accountable for the prior year's school performance, the initial test at an Edison school (or any new public school) carries no such burden.

Yet another, and preferable, alternative is to construct a baseline consisting of pre-Edison average test scores in the same school, provided that the student body composition does not change substantially in the shift to Edison management or provided that such changes are controlled for statistically. We were able to do that for four Edison schools: Dodge/Wichita; Washington Elementary/Sherman; Martin Luther King, Jr. Academy/Mt. Clemens; and Roosevelt Elementary/Colorado Springs. In every case where we examined pre-Edison test scores, we conducted an examination of student demographics and/or the percentage of students coming from the neighborhood attendance zones. Although the demographic profile of the students prior to the school's conversion to Edison was a little different from the student profile under Edison management, simple comparisons always favor Edison; in all cases, the students in the school prior to Edison were slightly more disadvantaged. Thus, if anything, the baseline constructed from pre-Edison school average test scores would be biased toward a positive impact on student achievement from the Edison program.

4. Data sources. Student achievement data for this report came from published and unpublished reports, information distributed by Edison at client meetings, and from Internet documents of school districts and states. Some information also came from end-of-year school reports prepared by Edison. We also gratefully acknowledge Edison's sharing of student achievement data with us. This information was particularly useful for examining the Edison charter schools where Edison conducts its own testing. In most instances, Edison provided data from the test publishers, indicating the number of students tested, test dates, test forms, and other relevant information.

We are encouraged by this cooperation on Edison's part. Although student achievement data from public schools are public information, some other companies in Edison's position are slower to recognize this. By providing us with information that is lacking from the company's usual presentation of student achievement data, Edison is signaling an acknowledgement that, when you educate students at public expense, there is an obligation to make public information that is typically a matter of public record and interest. We applaud Edison for this and urge the company to continue down that road. And we urge the public, most especially local and state public school officials, to ask for and assess all the data pertinent to Edison and other publicly funded schools. Indeed, stimulating such inquiry, so crucial for the cause of education reform that works, is the point of this study.

III. The Edison "Advantage"

What kinds of advantages does Edison point to when it offers its program to school districts and, indirectly, to parents? Success for All, the well-respected elementary school reading program that is especially tailored for disadvantaged children, is certainly one of them. Some of Edison's other program advantages may have more popular appeal than substance. The longer school day and school year, for example, are very attractive to the public and many parents, and this is certainly an advantage from a marketing point of view. However, the evidence that they improve student achievement is not conclusive. On the other hand, there are some unacknowledged financial advantages--for example, being able to dip into corporate coffers, at least for now--and some demographic advantages, which are unrelated to Edison's academic program but give Edison schools some advantages over the regular public schools with which they are competing.

1. Success for All. The centerpiece of Edison elementary schools is the highly regarded Success for All program. As of the 1996-97 school year, SFA is being implemented in approximately 500 schools in more than 126 districts in more than 37 states in all parts of the United States.[2] When fully implemented, SFA includes the following components:

- *Preschool and kindergarten.* Whenever possible, a half-day preschool program is provided for all four-year-olds. The program emphasizes language development, reading readiness, and positive self-concept. A full-day kindergarten program (some programs have only half-day) continues the emphasis on language and math concept development.

- *90-minute reading periods.* During 90-minute reading periods, students work in small, homogeneous groups of 15 students. The groups cut across grades and contain students who are all reading at the same achievement level.

- *Frequent assessments.* Every eight weeks, reading teachers assess student progress using personal observations and curriculum-based tests. Teachers use assessments results to identify students who are falling behind and need extra help and tutoring, as well as those who are progressing quickly and should be placed in a higher performance group.

- *Reading tutors.* In grades 1-3, specially trained, certified teachers who are reading specialists work one-on-one with any students who are failing to keep up with their classmates in reading. Specially trained paraprofessionals may also be reading tutors. Priority for tutoring is given to first-grade students, with each tutor providing help for 9 to 11 students. The one-on-one tutoring occurs in 20-minute sessions outside of the small-group reading sessions. Tutors also act as regular reading teachers during the 90-minute reading periods.

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[2] For more information on SFA see: http://successforall.com/components.html and http://successforall.com/considerations.html.

- *SFA facilitator.* The full-time facilitator, a member of the school staff who is released from regular classroom or administrative tasks, is responsible for making sure SFA is correctly implemented. The facilitator oversees details of the program, such as scheduling, professional development, classroom implementation, and assisting teachers and tutors with problems, including student behavior problems. He is responsible for organizing the regular student assessments and changing reading group assignments as needed.

- *Family support team.* The family support team promotes parental involvement in the school by providing information, organizing school-related activities, and conducting workshops for parents. An important function of the team is to intervene to help solve behavior and other problems. The team is composed of the principal or assistant principal, SFA facilitator, social worker, and other personnel.

Extensive research shows that SFA, when fully implemented, gets very good results, particularly with low-income children (Slavin et al., 1996a, b; Slavin and Madden, 1993). Statistically significant positive effects have been found from grades one to five, with especially large gains for students most at risk for failure. These effects have also been shown to be cumulative. While first-grade SFA students are about three months ahead of control students in reading, by fifth grade, they outscore control students by an average of a full grade level. Bilingual students and students in the lowest quartile of their grades average even higher gains, with effect sizes of 1.00 or more. (According to SFA standards, .50 is a moderate effect size, and .80 is considered large. See the discussion and table of effect sizes on page 27. See also http://successforall.com/sumresch.html and http://successforall.com/Articles.htm).

2. Longer school day. The evidence in favor of the longer school day (like the longer school year and the full-day academic kindergarten) is far less conclusive than that favoring SFA, in part because they are ideas rather than carefully developed and tested programs. There is no doubt, however, that parents find them attractive, so they constitute a marketing advantage, at the very least.

The Edison school day is about one hour longer than a typical public school day. While common sense would seem to argue that longer school days promote greater student achievement, common sense also tells us that this would depend on how the time is spent. Other nations, including Germany and Japan, have shorter school days than the U.S. at all grade levels, and especially in elementary schools.

3. Longer school year. The Edison program adds about one month to the school year. Although school years are longer in some other countries with successful education systems, school days are shorter in these countries. U.S. students, all told, already spend more time in classrooms than students in almost every other country including Germany and Japan. As with the longer school day, adding time is not sufficient, in and of itself, to raise student achievement; adding time on task probably is.

4. Magnet school effect. Like the financial advantages enjoyed by Edison schools, which this report will also take up, the magnet school effect is a characteristic of the Edison operation, rather than something the company advertises. However, both of these characteristics constitute considerable advantages for the Edison schools.

In Edison schools, at least some of the students come from outside the neighborhood attendance zone, and no neighborhood student must attend. Thus, Edison is able either to *recruit* students or *limit* enrollment in order to establish their optimum class size (about 28 students) and a relatively large school (usually around 600 students in grades K-5). The Edison schools in Wichita, Mt. Clemens, Colorado Springs, and Sherman are essentially "neighborhood magnet schools."[3] Indeed, in Wichita, Edison's most successful school to date, nearly half the students come from outside the neighborhood. The Edison charter schools in Boston, Worcester, and Lansing have no neighborhood attendance boundaries.

This arrangement is desirable from a financial point of view--full classes and full schools allow Edison to make the most efficient use of the staff and the physical plant.[4] But there is another advantage, as well: Although out-of-boundary students and those who attend charter schools are selected by lottery or on a first-come-first-served basis, the powerful effects of self-selection remain. Parents who go to the trouble of enrolling their children in schools outside their neighborhood are more likely to value achievement in school and to provide their children with the encouragement and help to succeed. And their children are more likely to be successful, regardless of the program a school offers. Having a significant number of students like these is an advantage for Edison, as it would be for any school, not the least because the effects of family and environment are likely to be attributed to the effects of the Edison program.

5. Financial advantages. One of Edison's trademark claims is that its program can educate students for the district's average per-pupil expenditure while offering many advantages that public schools cannot match. This notion of doing more with the same amount of money is (understandably) attractive to school districts and taxpayers. But, when you look at the data, Edison is having it both ways. While claiming to offer a school district extra value for the current per-pupil expenditure, the company is, in fact, spending more money per pupil than comparable schools in districts where they have set up shop.

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[3] Some of Edison's magnets or neighborhood magnets draw from a much larger pool of families than others. In Dade County, the Edison school is one choice in a three-school attendance zone. Mt. Clemens has only two elementary schools, one of which is an Edison school. Mt. Clemens' only middle school—of which Edison runs a part—recruits significant numbers of students from other school districts, thanks to Michigan's open enrollment law.

[4] One reason neighborhood schools do not have the waiting lists that Edison boasts of is that they have to enroll every child who resides in the neighborhood. Edison schools are not under this obligation. Even the Edison school in Colorado, which serves mostly students from the neighborhood, turned away dozens of neighborhood children because no space was available after Edison admitted several dozen out-of-neighborhood children ("Turnover Shrinks Edison Waiting List," Colorado Springs *Gazette Telegraph*, September 10, 1996). The students who were turned away were bused to out-of-neighborhood schools, which had to increase class size for a few weeks and put up with related educational disruptions.

The favorable charter-school funding laws in Michigan and Massachusetts give the Boston, Worcester, and Lansing schools more money than comparable schools in their districts. In Boston, for example, the Edison charter school gets per-pupil funding that includes a generous allowance for all types of special education students, including the orthopedically handicapped and the mentally retarded. But since Edison has hardly more than half as many special education students as the other local schools, and most of them receive most of their education in regular classrooms, the excess special education money is available for use in the regular program.[5]

In some school districts, the contracts with Edison have been carefully written to match the funding with the type of student enrolled in the school, so there are no extra public dollars. However, in cases like these, Edison's investors have compensated with substantial investments in technology and other corporate support, including money for out-of-town staff development and travel, on-site training by corporate officials, and the funding of start-up costs. In Sherman, Texas, Edison spent 12 percent more than its $1.8 million budget, and that does not count the $1.5 million in start-up costs *(Dallas [Texas] Observer,* August 15-21, 1996).

In Wichita, the expenditures budgeted by Edison did not include the company's corporate contribution to technology and facility upgrades, which total $1.5 million, or about $300,000 per year over the five years (including $370,000 for home computers). Little or none of the money for these upgrades is being paid directly by revenues from the school district.

But even without the corporate funding, Edison spends more than the per-pupil costs on which it claims to run its Wichita school. The company advertises that it ran its Wichita school on $3,700 per pupil in 1995-96, but the money the school received from the state and federal government for special education and Title I raise the per-pupil spending to about $4,000. Moreover, food service and transportation (still provided by the district) are not included in Edison's calculations. Edison pays for three additional buses for some of the out-of-neighborhood students, but the school district also deducts a 3 percent overhead charge in the process of calculating the total contract amount. Transportation, food service and district overhead would add about 10 percent to the $4,000 per-pupil cost, raising the total to about $4,400.

In Colorado Springs, Edison obtained the highest funding allowed under the state charter law, 104 percent of the district's average per-pupil cost, or $4,472 per pupil. A school-district cost analysis, which was part of the charter application, estimated that the district would lose $2.9 million in money that went to the Edison charter but would "avoid" only $2.2 million in costs. The $700,000 difference is the extra cost of the contract and represents resources that would otherwise have gone to the other schools and students in the district.

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[5] Seven Hills, Edison's charter school in Worcester, Mass., provides another example of the same kind of thing. This charter gets the same funding as Worcester public schools. However, in 1996-97, only 14 percent of the children attending were considered special-needs students, compared with 20 percent in the public schools. Moreover, 70 percent of these students were in the least serious special education categories (prototype 502.1 and 502.2), and the school had no very handicapped children. During the first half of the 1996-97 school year, 21 special education children from the school returned to public schools, two-thirds of them in moderately handicapped categories (prototype 503.3 to 503.41). Parents were told that the school could not adequately accommodate their children's learning disabilities (*Worcester Telegram and Gazette,* August 30, 1991).

Since the Edison advantage of being able to fund its programs with more than the average per-pupil expenditure available to most schools in its districts is not widely known or acknowledged, the company is garnering an enviable and beneficial reputation for efficiency. But will the consequences of this discrepancy between reputation and reality get Edison into financial trouble? Edison estimates that it can become profitable if it runs more than 100 schools. On the other hand, Edison faces the unforeseen complications that attend running schools in many different jurisdictions with many different rules and regulations and funding schemes, and this may eat into the company's profits. And if the company is caught in a crunch between its legitimate interest in turning a profit and the public's equally legitimate interest in having students receive the full program it paid Edison to deliver, which interest will prevail? There is no evidence with which to answer this question. But both the best and worst cases of private management or provision of public services provide ample reason to raise the question. What we can say at this point is that, much as public school districts sometimes cut corners, so, too, has Edison.

IV. Cutting Corners

The Edison program is expensive. A longer school day and school year, computers for most of the students, training for school staff in new educational programs-- all of these things cost money. At this point, Edison is still using corporate funds to help underwrite some of its program's costly trademarks, but the company's announced goal is to make a profit for investors while spending the same average per-pupil dollars as regular public schools.

How will it manage? The company says, by taking advantage of the efficiencies possible in the nationwide chain of schools it hopes to build. In the meantime, there are indications that Edison is cutting corners by hiring beginning teachers, who are at the bottom of the salary scale; upping class size; limiting special education, wherever possible, to children who can learn in a regular classroom; and skimping on the implementation of Success for All, the reading program that is the centerpiece of its elementary education program.

Of course, it would be unfair to draw conclusions based on limited evidence. We acknowledge the evidence is limited, and we use the word "indications" advisedly. But since Edison is asking school districts to make important financial and educational decisions that are also based on limited evidence, it is fair to point out signs of practices that could jeopardize the quality of Edison's program and therefore its results with students.

1. Inexperienced and low-paid teachers. It should be no surprise to hear that a great deal of research supports what common sense also tells us: Good teaching makes a big difference in student achievement. As is the case with other professions--medicine, law, architecture, etc.--experience is an important component of a teacher's professional expertise. According to the National Commission on Teaching and America's Future (Darling-Hammond, 1997), "Studies discover again and again that teacher expertise is one of the most important factors in determining student achievement, followed by the smaller but generally positive influences of smaller schools and small class size." Of course, experience and expertise are not identical, but the first is often a reasonable proxy for the second. In an analysis of 900 school districts in Texas, Ronald Ferguson (1991) found that teacher expertise--as measured by scores on a licensing examination, master's degree, and experience--accounted for about 40 percent of the variation in students' reading and math achievement, more than any other single factor. Ferguson and Ladd repeated the analysis in Alabama and found significant influences of teacher qualifications (1996). But Edison's practice of hiring a large number of beginning teachers suggests that getting a skilled and experienced staff takes second place to keeping costs down.

It's not that Edison hires teachers on the cheap. In Edison schools, teachers' salaries are pretty close to what they would be elsewhere in the district for the same level of experience.[6]

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[6] In Wichita, Dade County, and Colorado Springs, beginning salaries are linked to the union-negotiated salary schedule, but individual teachers usually negotiate their own salaries as well as any subsequent pay increases. In other charter schools, beginning salaries come close to starting salaries in surrounding public schools. However, Edison has the power to terminate the employment of any teacher for any reason, including replacement by a less-expensive teacher for economic reasons.

And Edison's differentiated staffing means that some people--lead teachers with less than five years of experience, for example--do much better financially than they would in the other district schools.

The real point is that when Edison hires the staff for its schools, it tends to favor beginning teachers over experienced ones. Although most educators would concur that it is not good for students to have a majority of inexperienced teachers, this policy does keep a company's personnel costs down:

- In 1995-96, only 12 percent of the teachers in Edison's elementary school in Wichita had a master's degree compared to 47 percent in the rest of the district, and they averaged 5.6 years of experience compared to the district average of 10.2 years (WSU, 1996).

- Some of the lead teachers in Edison's elementary school in Wichita had as little as 3 years of experience and would still be considered new teachers in any other school.

- At Edison's Wichita middle school in 1996-97, 55 percent of teachers had 5 or fewer years of experience ("Quarterly Progress Report, Jardine Middle School," October 25, 1996).

- In Dade County in 1996-97, only 10 percent of teachers were new to the profession, but the average teacher had only four years of teaching experience, and only one in four had a master's degree.

- In Edison's Sherman elementary school in 1995-96, 28 percent of teachers were new teachers compared to 7 percent in the remainder of the district, and 65 percent had five or fewer years of experience compared to 30 percent elsewhere in the district (TEA, 1997). The following year, 69 percent of Sherman teachers had fewer than five years of experience.

The financial impact of this hiring policy is clear from Wichita, Sherman, and Mt. Clemens. Even factoring in the 10 percent extra pay Wichita-Edison teachers received for their longer school day and school year, personnel costs were 20 percent lower than the average costs for school district personnel (Wichita State Evaluations, 1996). In Sherman, the 1995-96 average salary was no higher for Edison teachers than for other district teachers, despite Edison's longer school day and school year (TEA, 1997). And in the Edison school in Mt. Clemens, the average teacher salary dropped from $55,000 to $45,000 when Edison began managing its school (http://www.mde.state.mi.us/cgi-bin/gf/reports/MSR97/M/50160/B0049.TXT).

2. High teacher turnover. Most educators also would concur that a high teacher turnover rate in a school is not good for students. In fact, this is a problem that surfaces often in discussions of urban schools, and it is a problem that has emerged in Edison schools to an even greater degree.

Edison selects all the teachers for its schools, and when a school converts to Edison management, only a few of the teachers from the pre-Edison school are likely to be left; presumably, Edison teachers are there because they want to be and because Edison thinks they can do the job. Edison admits to a turnover rate of 23 percent across all its schools, but it is higher in some. In Colorado Springs, there was a 27 percent turnover at the end of the first year (*Springs Magazine,* August, 1997). The situation in Dade County was even more severe; in its June 1997 year-end report, Edison estimated that at least 20 of 54 teachers--nearly 40 percent--were not coming back. And a report submitted to the Massachusetts Department of Education indicated that 31 of the teachers at the Boston charter school would not be returning--a 44 percent turnover.

This is all the more striking because, if teachers survive the first five years, teaching is not, generally, a high turnover profession. U.S. Department of Education figures indicate that approximately 13 percent of U.S. teachers either leave their current school for another or leave teaching altogether each year.

High turnover can cause (and/or reflect) poor staff morale, even in a school with an established program. When a new program is being instituted, high turnover is likely to be especially destructive. Teachers who are still relatively inexperienced in a demanding new way of doing things--like, for instance, the Success for All program--are also faced with new colleagues who are totally unfamiliar with what is required of them. In circumstances like these, the program--and the students--are likely to suffer. Edison's response to the resignation of nearly 40 percent of the teachers in Dade County indicates that the company itself recognizes the impact of high turnover: Edison pledged to invest in training, as though Dade were a first-year school.

However, the company's practice of hiring mostly new teachers may lead inevitably to high turnover, with all the resulting problems. National figures show that 50 percent of new teachers leave the profession, at least temporarily, within the first five years. By choosing this method of economizing, Edison is putting its program at risk.

3. Large class size. Small classes are very expensive, as critics of current efforts to reduce class size always point out. Raising class size, which few policy makers ever suggest, is a big money saver. And it is the second policy that Edison is apparently adopting in a number of its schools--at least unofficially. Except in reading, where Edison, following the Success for All model, uses small reading groups and tutors for children who are having particular problems, average class size is high by national standards and by the standards of most localities where Edison operates.

The average elementary school classroom in the United States contains about 24 students and has changed little in size in 30 years. Middle-school class size is about 25 students. Of course, there is great variation among classrooms within a school district and among school districts. Over the same period of time, pupil-teacher ratios have steadily declined to the current figure of approximately 17 pupils per teacher. This decline is largely the result of increased services to special needs students, which have enlarged school staff without reducing class size in regular classrooms.

At first glance, Edison appears to provide a rich complement of staff, with support teachers for language, art, music, and physical education. However, except for reading, where, following the Success for All model, Edison reduces reading groups to 15 students, classes at a typical Edison school contain around 28 students. In Colorado Springs, there were up to 30 students in a class (*Springs Magazine*, August 1997). And despite the initial publicity about classes of 21 students at Edison's Boston charter school, the class size grew to 28 (*The Nation*, September 28, 1997). Some schools have a slightly lower average class size--in the range of 26 to 28 students (in Dade County, Mt. Clemens, the Lansing (Michigan) elementary school, and the Boston charter school). In Sherman, class-size targets are about 24.

- The 1995-96 year-end report for the Wichita elementary school says that reading groups are small but that other classes, except for kindergarten, average 27 to 28 students. The pupil-teacher ratio of 20 was higher than any of the eight comparison schools identified by the Wichita State University evaluation (1996). (The comparison schools ranged from 17.1 to 19.3.) School district data for comparison schools identified in this report also show that Edison had fewer teachers per 100 students (5.0) than any of the comparison schools, which range from 5.3 to 7.1 (see table A1).

- In Dade County, in 1996-97, the year-end report said the reading classes in Edison's elementary school averaged 22 students, with other classes averaging 27 to 28 students. Approximately 1,100 students were served by 41 regular teachers and 16 special teachers (3 art, 3 music, 3 physical education, 6 language, 1 special education) for a pupil-teacher ratio of 19 to 1.

- In the year-end report on the Mt. Clemens middle school, Edison describes "an innovative scheduling [that] enables students to have reading and math in classes of 25 and 22 students respectively. Other classes average 28 students each." Classes this size are hardly remarkable, given that the U.S. average for middle schools is about 25. However, the pupil-teacher ratio does match the U.S. average of 17 to 1: 312 students were served by 10 regular teachers and 8 special teachers (1 art, 1 music, 2 physical education, 2 language, 2 special education).

- Edison's 1997 year-end report at the middle school in Wichita says that the average class size is 26, with ESL (English as a Second Language) classes being somewhat smaller. Approximately 30 regular teachers and 14 special teachers (1 art, 4 physical education, 3 language, and 4 special education) serve approximately 936 students for a pupil-teacher ratio of 21.3. With 4.7 teachers per 100 students, the school is well below the other four middle schools in the district that have a similar percentage of students qualifying for free or reduced-price lunch. In these schools the number of teachers per 100 students ranges from 5.9 to 7.0.

4. Limiting special education to children who can spend most of their time in regular classes. Many parents of special education students, who are eager for their children to learn in the same classes as other youngsters their age, would applaud this Edison policy. However, the range of children classified as special education students is enormous, from those with mild learning disorders all the way to children who are profoundly disabled or suffer from severe emotional disturbances. And there is considerable dispute about whether *all* special education children, regardless of their disability, should be educated in regular classes. What no one disputes is that mainstreaming special education students--and particularly children with severe problems--is less expensive than providing them with small classes and highly trained special education teachers.

Is Edison's special education policy, in part at least, a way of saving the company money? That is what Edison president, Benno Schmidt, said at a Smith-Barney conference for education investors that was held in New York City on May 20, 1997. Asked by investors about where Edison's savings would come from, Schmidt replied that the Edison program would deliver excellent results for the great majority of kids classified as special education--but in regular classroom settings. And while the public schools used expensive specialists and resources, the Edison program would deliver a program without specialists. A look at Edison special education data shows how the company seems to be making the policy work to its financial advantage.

One curious feature of student demographics in the Edison schools is the relatively small percentage of special education students in comparison with the percentage in regular public schools. In 1997-98, Edison provided special education services for only 7 percent of its students (950 out of 13,000), while the national figure was 12 percent. In Wichita, only 5 percent of the students were classified as special education, and in Dade County, only 4 percent. The Boston charter school had a much higher percentage of special education students--11 percent (http://www.doe.mass.edu/pic.www/prof481.html). However, this was markedly lower than the 16 percent figure for the state and 20 percent for the city of Boston (http://www.doe.mass.edu/pic.www/prof035.html).[7] Finally, as already mentioned earlier, the percentage of special education students in Edison's Worcester charter school was 14 percent, compared with 20 percent in the public schools. These students had relatively mild handicapping conditions; and a quarter of them returned to the Worcester public schools within five months.

It is difficult to account for these differences. Public schools must either admit special education students living in their attendance area or pay for their education elsewhere. Is Edison able to screen out special education students who, they believe, could not be educated in a regular classroom? Is the company failing to count as special education students youngsters who would be so counted elsewhere? (Given the tendency of some public schools to over-use the special education classification,, this could be a plus for Edison.) Or are we simply looking at some kind of statistical fluke that will correct itself in the future? Whatever the cause, Edison is currently able to save money by providing services to a smaller percentage of special education students than regular public schools accommodate.

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[7] A number of news stories and magazine articles document the special education problems Edison experienced in Boston. (See *Education Week*, February 19, 1997, *The Nation*, September 28, 1997, and *Phi Delta Kappan*, March 1998.) Federal investigators found that Edison failed to notify parents of their procedural rights, failed to provide student support in regular and special education settings, and did not provide a full day for one of the students. Peggy Farber, in her *Phi Delta Kappan* article (March 1998) about the Boston charter, attributes the problems to a rocky startup. However, she does not look at the relatively small number of special education students in Boston and throughout the Edison schools.

In some cases, Edison also seems to be providing fewer services. The company indicates that the normal caseload for a special education teacher is 19 students. But in Wichita, 29 special education students (18 with learning disabilities) were handled by a paraprofessional and a special education administrator who split time between teaching and administering the special education program. In Worcester, two special education teachers served 75-80 students. And in Dade County, according to 1996-97 school district records, one special education teacher served a 1,100 student school--about 44 students---and there is still only one teacher for the academic year of 1997-98.

There is another way that special education students might be helping Edison's bottom line. Massachusetts and Michigan charter school laws split up special education money and allocate it to charter schools in the same way they allocate regular education money. So charter schools get these resources whether or not a specific charter school provides more services or fewer services than the sending school district (in Massachusetts) or the state average (in Michigan).

But even in a district where funding is provided for specific students with specific disabilities, there can be room for economies. In the Wichita example cited above, 29 special education students, served by a teacher who doubled as a special education administrator and by one paraprofessional, generated about $106,000 in extra revenue in 1995-96. In 1996-97, 21 students were served and in 1997-98, 25. Edison received $105,000 and $112,000, respectively—which, unless the special education administrator and the paraprofessional were handsomely paid, is about $50,000 a year more than the company spent. Admittedly, this kind of saving does not amount to much in an enterprise that still has only 25 schools. But this kind of practice will generate more significant savings if Edison attains the scale the company is hoping for.

5. Skimpy implementation of Success for All. One of the big problems with any successful program is reproducing on a large scale the excellent results from the one or two original sites. The researchers who created SFA are aware of this problem, and they have attempted to solve it by carefully specifying the personnel and procedures necessary in any school that adopts SFA. Each SFA tutor should work with 9 to 11 students, and SFA recommends that, in a high-poverty school, 30 percent of first graders, 20 percent of second graders, and 10 percent of third graders have tutors (http://successforall.com/components.html).

SFA researchers have also documented the disappointing results that some schools implementing only part of the program have gotten. In Houston, Texas, high-implementation schools had positive effects while low-implementation schools had small positive to moderate negative effects. In addition, Slavin et al. (1997) attribute the exceptional results for low-performing students to full implementation of the Family Support Team, including social workers (see Nunnery et al., 1996, for schools in Houston and Ross, Smith, Lewis, & Nunnery, 1996, for schools in Memphis that implemented only part of the SFA program).

The contrast between the Edison experience with SFA in Wichita and its experience in Dade County seems to illustrate these findings. During the 1995-96 school year, Wichita had six tutors--all of them certified teachers--which was a full complement for a school of 600 students. Wichita is an Edison showcase, and among the Edison schools with SFA-style evaluations, it performed the best.

Edison's Dade County school, on the other hand, was considerably short of the SFA complement of tutors. In order to meet SFA specifications, the 1,200-student school should have had at least 10 to 12 tutors just to cover grades one to three. In 1996-97, it had only five tutors for the entire school. (The following year, it had only 6.)[8] And the tutors were frequently used as substitute teachers. In 1995-96, the school also lacked the requisite SFA full-time coordinator, who organizes the extensive testing and regrouping of students and makes sure the program is being carried out according to specifications. Given the spotty implementation of SFA in Dade County, it should be no surprise that preliminary results showed no difference in reading achievement between students in the Edison school and control group students.

The problems that have been highlighted here could result from problems at individual schools rather than a pattern of cutting corners--it's too early to tell (though Edison's own comments make that unlikely with the special education examples). In any event, it is not too early for Edison--or its prospective clients and investors--to be alerted to possible areas of weakness in the project, especially since they may help explain Edison's mediocre performance in reading--which will be taken up in the next two sections.

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[8] It should be noted that Edison's formula for allocating SFA tutors is different from that called for by SFA. Edison's formula provides one tutor per 150 children. In poor schools, that means only two-thirds of the tutors SFA recommends (http: successforall.com considerations.html). In Dade County, even fewer tutors are employed.

V. Success for Edison?
The Evaluation of Edison's SFA Program

The Primary Reading Studies are the only full-scale evaluations that the Edison Project has carried out. Edison hired a distinguished researcher, Robert Mislevy, to analyze data, though Edison itself was primarily responsible for the data collection. The studies are a modified version of the standard Success for All evaluation.[9] They use the same battery of standardized tests as an SFA evaluation and generally follow the same evaluation design. The few idiosyncrasies--and their effects--will be commented on in the course of this discussion.

The Edison evaluation is very limited in scope, covering only four of the eight Edison elementary schools operating through the 1996-97 school year--Wichita, Mt. Clemens, Sherman, and Colorado Springs. Moreover, second-year evaluations are available for only two of these schools, Wichita and Mt. Clemens, because no control group data were collected in Sherman during its second year, and none are currently being collected in Colorado Springs.

The results are tentative at best, and Edison is straightforward about this. However, the company is not so ready to admit that the results are extremely mediocre. More important, Edison never directly compares the achievement of its schools with achievement in SFA schools, though it sometimes makes the general claim that Edison schools are doing as well.

There is a good reason for this reticence: None of the Edison schools, even Wichita, which is Edison's best, achieves at the average level of SFA schools that fully implement the program. And this is the case even though SFA schools typically have a higher percentage of students eligible for free or reduced-price lunch than Edison schools.

Standard SFA Evaluation Design

Every SFA school involved in a formal evaluation is matched with a control-group school that is similar in poverty level (percent of students qualifying for free or reduced-price lunch), past achievement level, ethnicity, and other factors. Schools are also matched on past achievement levels in district-administered standardized test scores given in kindergarten or on Peabody Picture Vocabulary Test (PPVT) scores given by the project in the fall of kindergarten or first grade.[10] In an SFA evaluation, trained testers individually administer the following measures:

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[9] Edison's descriptions of the Primary Reading Studies have fostered some confusion about the role of the Educational Testing Service in the study. Though Robert Mislevy is an employee of ETS, he was hired as an independent expert by the Edison Project, and the cover page of each evaluation clearly states that fact: "These evaluations were not carried out under the auspices of ETS, and the conclusions are solely that of the author." However, on its web page, Edison says that the evaluations are by ETS, and the *New York Times* (December 15, 1997) repeats the error, reporting that the tests were "analyzed by the Educational Testing Service at Edison's behest." Needless to say, the confusion, whether intentional or inadvertent, has nothing to do with Mislevy and does not reflect on his competence or probity.

[10] The PPVT is designed to measure vocabulary in non-readers and is often used to assess school readiness for children in the 4 to 5 age group. Children look at pictures and match them up with words the interviewer reads out.

- Woodcock Reading Mastery Tests:

    1. Word Identification assesses recognition of common sight words.
    2. Word Attack assesses phonetic synthesis skills.
    3. Passage Comprehension assesses comprehension in context.

    (Students in Spanish bilingual programs are given the Spanish versions of these scales.)

- Durrell Analysis of Reading Difficulty. The Durrell Oral Reading scale is also administered to students in grades 1 through 3. It presents a series of graded reading passages that students must read aloud, followed by comprehension questions.

A standard SFA evaluation compares raw scores on all measures using analysis of co-variance (a statistical technique that enables researchers to account for the independent effects of family background, gender, and initial ability on test scores). The evaluation design also calls for separate analyses for the lowest-achieving 25 percent of students in a grade.

The Woodcock and Durrell scales are more accurate than district-administered tests and much more sensitive to real reading gains because they allow testers to hear children reading material of increasing difficulty and responding to questions about what they have read. The Woodcock and Durrell are themselves nationally standardized tests and produce norms (e.g., percentiles, NCEs and grade equivalents) just like any other standardized measure.

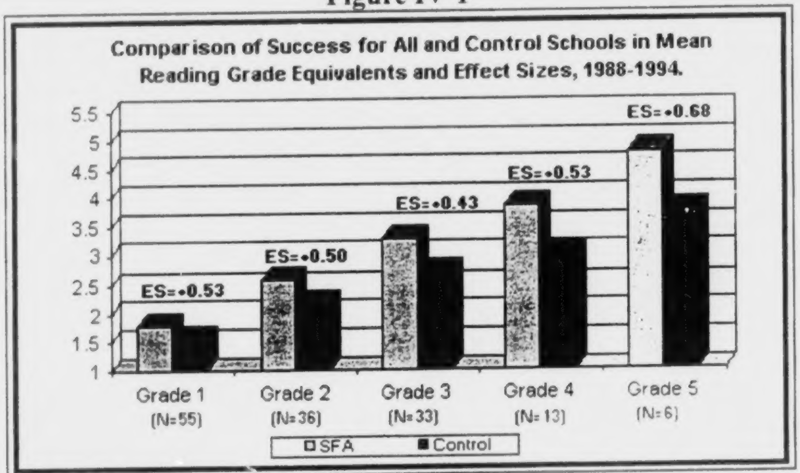
1. Results of standard SFA evaluations. Standard SFA evaluations commonly report student performance in grade equivalents (adjusted for co-variance) and effect size averaged across individual measures (such as the Durrell and the three subscales of the Woodcock tests). Effect size (ES) is the difference between SFA and control-group students divided by the standard deviation of the control group.

Because mathematical operations such as averaging cannot be performed on grade equivalents (GEs), these measures are not used in SFA statistical analyses. However, they can be useful for lay readers, so SFA summaries include them. Standard SFA evaluations follow children who began in SFA in first grade or earlier and compare them to children who attended the control-group school over the same period. Students who start after first grade are not included in evaluations because they are not considered to have received the full SFA program. Also, students who leave either the SFA or control-group school are dropped from the analysis.

2. Reading outcomes in standard SFA evaluations. SFA has been in the schools for nearly 10 years, and numerous evaluations have been carried out to determine the program's effectiveness. So there is a good deal of evidence comparing the progress of SFA students with students in control groups. The following graph, which gathers together data for 55 schools with SFA evaluations, shows SFA students consistently outperforming similar youngsters in similar schools. The graph uses a method called "multi-site replicated experiment" and is described in Slavin et al., 1996a, b and Slavin and Madden, 1993.

The graph indicates the number of groups, or cohorts, of 50 to 150 students represented by the bar for each grade (the first grade, for example, involves 55 cohorts). The results, shown on the top of each pair of bars, are reported in effect size (ES). An effect size of .50 is generally regarded as quite successful, and, except for grade 3, where the effect size was a still considerable .43, the ES's are all above .50, with the largest, 0.68, in grade 5. The numbers along the side of the graph represent grade equivalents (GEs) although, as already indicated, no calculations are based on GEs. (For more details on methods and findings, see Slavin et al., 1996 a, b and the full site reports for the various schools the data for which are included in Slavin et al., 1996 a, b.)

Figure IV-1



Source" http://successforall.com/sumresch.html

Statistically significant (p=.05 or better), positive effects of SFA (compared to controls) were found on every measure at every grade level, from grade one through grade five. As already indicated, effect sizes averaged around a half standard deviation at all grade levels. Effects were somewhat higher than this for the Woodcock Word Attack scale in grades 1 and 2. But in grades 3 through 5, effect sizes were more or less equivalent on all aspects of reading.

Effect sizes for students in the lowest-achieving 25 percent of their grades were particularly positive in standard SFA programs, and consistently so. They ranged from 1.03 in first grade to 1.68 in fourth grade. Analyses of results at individual schools found statistically significant differences favoring low achievers in SFA on every measure at every grade level.

The following table gives some rough equivalents for effect sizes and normal curve equivalents (NCEs) and attaches them to words roughly describing the educational impact denoted by the effect sizes and NCEs. Both SFA evaluators and the Mislevy evaluations for Edison use these standards.

Educational Impact	Effect Size	Percent of Students Exceeding Control Group Average	Approximate Difference in Normal Curve Equivalents (NCEs)
None	.00	50%	0
Small	.20	58%	4-5
Medium	.50	70 %	11-12
Large	.80	80%	18-20

3. Changes in effect sizes over years of implementation. Another important finding about SFA is that the longer the program is in place, the more the children improve. Thus, according to SFA research findings, the effect size for first graders, which is 0.42 at the end of the first program year, rises to 0.53 for first graders in the second program year, and 0.73 in the fourth year of the program. There is a similar pattern for second and third graders.

Edison's Success for All Evaluation Design

As already indicated, Edison's evaluation design follows the standard SFA evaluation design very closely. Some of the divergences result from Edison's modification of the SFA program, others from differences in school populations, including problems Edison had or believed it had in constructing suitable control groups. Not all of these divergences are explained, acknowledged, or factored into the evaluation design, and they may or may not lead to more favorable overall results for Edison. However, they don't rule out a valid comparison between Edison's results and the SFA results just discussed.

1. School year. Edison has a longer school year than traditional schools, so in principle, it tests its students in June while comparison students are tested in May. Assuming Edison is correct about the positive effect of an extra month on student learning, this month needs to be taken into account in comparing results. (Readers might want do do this by subtracting .10 of a grade equivalent from Edison's test scores to account for the extra month.)

2. Control groups

- Mt. Clemens: Since there is only one other elementary school in the district, the entire control group was drawn from this school. Descriptive data from Edison indicate a close match of Edison students with students in the control group based on race, sex, and free or reduced-price lunch eligibility. Mobile students (i.e., those who enter or leave the class after the reading study is underway) were excluded from both Edison and control groups, in part because some control students transferred to the Edison school and some Edison students transferred to the other district school. All this is consistent with SFA evaluation design.

However, no measure of initial ability (such as PPVT) was ever collected from control-group students. So it is impossible to tell if Edison and control-group students were, in fact, well matched. Since no correction for differences in initial ability is possible, the outcome of the Mt. Clemens evaluation will always be inconclusive.

- Wichita: The control group was drawn from all the Title I schools in the district and was designed to match the poverty, race, and gender of Edison students. The initial match was probably better than is usual in an SFA evaluation. However, the design introduced a bias in favor of the Edison school by counting mobile students in the control group and not doing so in the Edison school; mobile students should not be counted in either.

  The student population of the Wichita Edison school creates a further bias in the school's favor. Many or most of the control students come from neighborhood schools. However, Wichita Edison is a "neighborhood magnet." That is, it gets about half its students from families that choose to make the extra effort to get their child into a school outside their neighborhood and choose to put up with whatever inconveniences are involved in sending the child there. Edison could deal with the bias that results from this self-selection by analyzing the neighborhood and out-of-neighborhood students separately. Or it could also draw the control group from other Witchita neighborhood magnets (such as the pre-Edison Ingalls, Washington, and Kellogg) with similar poverty levels and demographics.

- Sherman: The control group was a combination of children whose parents volunteered to bring them in for testing and summer school students in need of remedial work. This made for a less-than-perfect match between Edison and control group students. However, variations like this are not unusual in SFA evaluations, which is why, as already mentioned, SFA uses analysis of co-variance (a method that statistically controls for variations in experimental and control groups).

  Mislevy did use statistical adjustments to report *adjusted* differences and *adjusted* effect size in Sherman, as SFA does in its evaluations. Edison also reduced the variations between the two groups by dropping ESL (English as a second language) students, who comprised 15 percent of Edison students and 5 percent of control group students, from all comparisons. As a result of these efforts, the Sherman evaluation is valid according to SFA methodology. In fact, it follows SFA evaluation design more closely than the Wichita and Mt. Clemens evaluations, which report only *unadjusted* effect sizes and grade equivalents.

  Nevertheless, after making considerable and, it would seem, successful efforts to make the two groups in Sherman comparable, Edison said its reason for discontinuing the second year study was the poor match between Edison and control group students:

  > The control group of students used in Sherman for purposes of comparison was not well matched to the Edison students because the Edison students were generally much more disadvantaged and the control students began the year far ahead academically. In controlled comparisons the two groups effectively tied in their academic progress (http://www.aft.org/research/edisonproject/pages/edison-3-98/Docs/1995Assess.html).

Given this reasoning, it is inconsistent for Edison to count Mt. Clemens as a success. As already noted, no data on initial ability were ever collected there, so the comparability of Edison students and control group students cannot be established.

Of course, if there were a problem with the Sherman control group, Edison had a chance to improve the match in the second year evaluation.[11] Instead, no control group data were collected, which effectively cancelled the evaluation. Since this decision coincided with Sherman's second year of disappointing scores on the Texas state assessment (TAAS), it raises some questions about Edison's willingness to risk evaluating a product that might not be up to the expectations it advertises.

- Colorado Springs: The Primary Reading Study here faced a problem similar to Sherman's: The control group tested higher on the pre-test than the Edison students. The reading study did adjust for the pre-test difference. However, it failed to adjust for race, gender, and free-lunch status, even though such adjustments are part of SFA evaluation design and were made in other Edison schools. According to school officials, race and free-lunch data were available and could still be added to the study. But given the current gaps in the data, any comparisons between SFA achievement nationally and achievement in Colorado Springs would be problematic. And since Edison has not made arrangements to collect control group data for the second year, the company has effectively terminated the second year of the evaluation. Again, one might ask if these problems result from ineptitude or from Edison's wish to shine the spotlight away from mediocre first-year results at an Edison school.

3. Student populations. Edison schools enroll more poor students than the average American school, but the students are not as poor as the company says. The 1995-96 and 1996-97 Wichita evaluation claims that:

> ...the students in the [Edison school] and control groups are generally disadvantaged; about three-fourths of them participate in the free or reduced lunch programs. On the whole, they are probably more like the lower 25th percentile of the students in the Slavin *et al.* sites than the typical students in those sites (p. 7).

In fact, except for Dade County, all of the Edison schools opened in 1995-96 and 1996-97 are *less* disadvantaged than the typical SFA school, where free-lunch students usually comprise at least 90 percent of enrollment (Slavin, Madden, and Wasik, 1996). The percentage of students qualifying for free or reduced-price lunch at the Edison school in Wichita fell to 69 percent in 1997-98, and the school is in danger of losing its funding as a Title I school-wide project. The student populations at Sherman (64 percent eligible for free or reduced-price lunch), Boston (51 percent), and Mt. Clemens (48 percent eligible) are more advantaged than the population at Wichita. Moreover, the percentages of students eligible for free or reduced-price lunch have been dropping at Edison schools. In addition to the decline already noted in Wichita, the percentage of eligible students fell from 54 to 44 percent in Colorado Springs over a two-year period, from 59 to 48 percent in Mt. Clemens, and from 69 percent to 51 percent in Boston. However, the percentage of free or reduced-price lunch in Dade County rose from 86 to 90 percent.

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[11] In Mt. Clemens in the year-two evaluation, Edison and control-group students were "rematched" according to ethnicity, gender, and eligibility for free or reduced-price lunch. Since there were no data about students' initial ability, this rematching was futile.

VI. Results of the Edison Primary Reading Studies

The results of the Edison Primary Reading Studies show the performance of Edison schools to be unremarkable thus far. However, Edison's news releases and promotional materials do not necessarily reflect what the data show. In December 1997, Edison made this claim:

> Primary reading achievement studies show that students who began at an Edison school in kindergarten or first grade are consistently developing stronger skills than similar students locally. At [the Wichita and Mt. Clemens elementary schools], students in grades K-2 are strongly outperforming their counterparts in local schools in reading; if the trends continue, Edison students could be a full-year ahead of similar students by the end of fifth grade (Edison Press Release, Dec. 15, 1997. Also, see http://www.edisonproject.com/annualframe.html).

And a past posting on the Edison Project's Web site states that "at the end of year one, primary reading achievement is slightly above nationally normed grade levels in kindergarten, on grade level in first grade, and slightly below grade level in second grade" (http://www.aft.org/research/edisonproject/pages/edison-3-98/Docs/1995Assess.html).

The statement from the press release is simply not true. It was apparently derived by extrapolating the record of SFA schools (see table, p.26) to the Edison schools rather than from data contained in the Edison Primary Reading Studies, and it is contradicted by Edison's own record. The statement posted on the Web, while less hyperbolic, is also untrue. Edison has been less successful than the average SFA school.

It would be more accurate to say that Edison's performance is uneven. While the favorable comments cited above apply to Wichita, students in Edison's Sherman, Texas, school performed below grade level in all grades. In Mt. Clemens and Colorado Springs, kindergarten students performed at grade level, not above it. In grade one, only Wichita students performed at grade level in the year-two evaluation.

Table VI-1 allows a comparison of SFA national data and data from the Edison Primary Reading Studies. The SFA data, which are given in the first section of the table, are taken from the most recent compilation of SFA evaluations, comprising several dozen schools (Slavin et al, 1996a, b). The Edison data for the six comparable Edison reading evaluations appear below the SFA data. Because SFA evaluations do not report kindergarten results, comparability between Edison and SFA does not properly begin until grade one.

Table VI-1

Reading Achievement of Edison Project and Success for All Schools

	K		Grade 1		Grade 2		Grade 3		Grade 4	Grade 5
Success for All Evaluations--All Years										
Number of schools			55		36		33		13	6
Number of students			5,000+		3,600+		3,300+		1,300+	600+
Adjusted Effect Size			0.53		0.50		0.43		0.53	0.68
Significant at .05 level			Yes [a]		Yes [a]		Yes [a]		Yes [a]	Yes [a]
GE-Success for All			1.8		2.6		3.3		3.9	4.8
GE-Control			1.6		2.2		2.7		3	3.8
		Pupils		**Pupils**		**Pupils**		**Pupils**		
Mt. Clemens-Year 1										
Unadjusted Effect Size	0.48		0.36		-0.15					
Subtest sig at .05 level	3 of 4		1 of 4		0 of 4					
Average GE-Edison (b)	1.0	96	1.8	81	2.1	75				
Average GE-Control (b)	0.8	61	1.6	60	2.2	60				
Mt. Clemens-Year 2										
Unadjusted Effect Size			0.26		0.45		-0.24			
Subtest sig at .05 level			0 of 4		1 of 4		0 of 4			
Average GE-Edison (b)			1.9	35	2.7	42	2.9	37		
Average GE-Control (b)			1.7	35	2.2	42	3.1	37		
Wichita-Year 1										
Unadjusted Effect Size	0.68		0.37		0.07					
Subtest sig at .05 level	4 of 4		2 of 4		0 of 4					
Average GE-Edison (b)	1.3	94	2.0	96	2.7	88				
Average GE-Control (b)	1.1	83	1.8	88	2.6	89				
Wichita-Year 2										
Unadjusted Effect Size			0.49		0.23		-0.04			
Subtest sig at .05 level			4 of 4		0 of 4		0 of 4			
Average GE-Edison (b)			2.1	77	2.8	81	3.4	75		
Average GE-Control (b)			1.8	51	2.6	58	3.4	52		
Sherman-Year 1										
Adjusted Effect Size	-0.18		-0.03		0.02					
Subtest sig at .05 level	1 of 4		1 of 4		0 of 4					
Average GE-Edison (b)	1.0	103	1.6	77	2.4	77				
Average GE-Control (b)	1.2	87	2.0	80	2.7	62				
Colorado Springs-Year 1										
Adjusted Effect Size	0.20		-0.09		-0.22					
Subtest sig at .05 level	2 of 4		2 of 4		1 of 4					
Average GE-Edison (b)	1.0	100	1.8	125	2.4	99				
Average GE-Control (b)	1.0	105	2.1	103	2.8	86				

Source: Slavin, Madden & Wasik (1996); Edison Primary Reading Studies by Robert Mislevy.

a. Statistically significant for every measure at all grade levels favoring SFA.

b. Average of GE for each of the four subtests (for illustrative purposes--mathematical operations should not be performed on GEs).

The performance of Edison schools was similar to the SFA average in grade one of the Wichita year-two evaluation and grade two of the Mt. Clemens year-two evaluation (although only one of four tests was statistically significant). In any case, since the Mt. Clemens study contained no control for initial ability, results there should be viewed cautiously, and perhaps as inconclusive. Sherman and Colorado Springs showed statistically insignificant effects favoring the control group. However, defects in the implementation of the evaluation design in Colorado Springs makes these results inconclusive. The other four valid comparisons were in the .26 to .37 range (for the most part, with statistically insignificant differences for at least three of the four individual reading tests), which is below the SFA average.

Since SFA evaluations include only those students beginning SFA in the first grade or earlier, the second-grade Edison results in year one and the third-grade results in year two evaluations should not be compared to SFA results. The comparison of effect sizes for SFA and the comparable Edison studies are graphed in Figure VI-1. Of eight valid comparisons, two would be considered moderate effects (equivalent to 10 to 11 NCEs) favoring Edison, four would be considered small effects favoring Edison (4 or 5 NCEs), and two (grade 1 in Sherman and Colorado Springs) reveal no educational effect.[12] The Sherman evaluation, which would have yielded a second-grade and another first- grade comparison, was discontinued after the first year. It should be noted that SFA researchers do not drop unsuccessful schools from a study; doing so would create a serious bias in any results. If the second-year study in Colorado Springs is not conducted (and the first-year not completed), no serious conclusions about the effectiveness of Edison's SFA program in these schools will be possible because they will be have to be based only on the remaining studies in Wichita and Mt. Clemens. And the Mt. Clemens findings are questionable, given the general lack of statistical significance and the failure to control for initial ability.

Interpreting the Results

Here are some caveats for interpreting the results of the Primary Reading Studies and Edison's claims about its progress.

1. Looking at non-SFA effects. The Primary Reading Studies follow SFA protocol in not including students who did not begin SFA in grade one (though effect sizes for these classes are noted). Nevertheless, negative or small effect sizes for these classes should not be ignored. The Edison program includes many components besides SFA, such as longer school days and years and high spending on educational technology. Small or negative effect sizes strongly suggest that these attractive "extras" are, so far, not successful in improving student achievement.

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[12] A moderate effect (ES of .50) means that about 70 percent of the higher scoring group does better than the average of the lower group. A small effect size (ES of .20) means that 58 percent of the higher group does better than the average of the lower group.

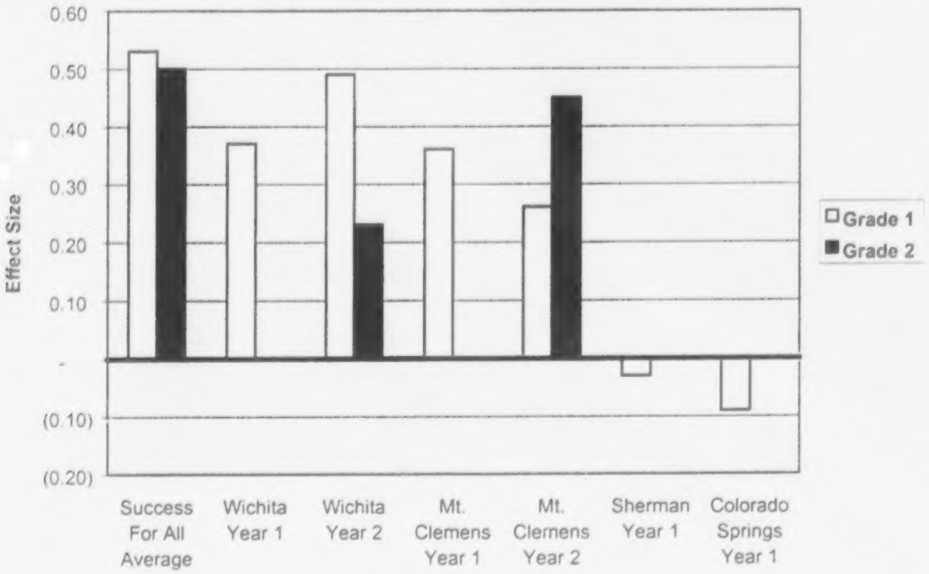

Figure VI-1--Comparison of Success For All and Edison Primary Reading Studies

2. An off-the-wall calculation. In the 1997 annual report, Edison says that Colorado Springs students "outgained" the control group, with effect sizes ranging from an excellent .70 in kindergarten to a small, but still significant, .20 in second grade. Edison got these numbers by calculating the difference between the pre-test (the PPVT, a *non-verbal* test of intelligence) and the average of four post-tests (which assess *verbal* skills such as word identification and passage comprehension) and then rendering the results of this calculation in effect sizes.[13] This strategy ignored Mislevy's approach to the problem--which is also the one used by SFA researchers. Mislevy statistically adjusted each of the four post-tests for the effects of the pretest using analysis of co-variance. Mislevy's results showed that the average effect size in kindergarten improved from .06 to .20; in first grade from -.36 to -.09; and in second grade from -.48 to -.22.--in other words, they were less impressive than the ones Edison got with its off-the-wall calculations. However, since Mislevy's results are not adjusted for race, gender, and eligibility for free or reduced-price lunch, they are also not conclusive, either.

3. Subtest effect sizes. Table VI-2 presents data for individual tests, including statistical significance. The word-attack effect size for grade 1 in the first-year at Mt. Clemens (.84) was about four times larger than any of the other three tests and raised the combined effect size of all tests to .36--still a below-average score for SFA programs. Strong word-attack scores are common in the early grades in SFA schools. In Mt. Clemens, no more than one in four individual tests was statistically significant in grades 1, 2 or 3.

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[13] See page 24 for a description of these tests.

Table VI-2
Subtest Effect Sizes in Edison Primary Reading Studies

		Woodcock			
	Durrell Oral	Word ID	Word Attack	Passage Comp.	Average
Mt. Clemens-Year 1					
Kindergarten	0.50	0.55 *	0.54 *	0.34 *	0.48
Grade 1	0.27	0.17	0.84 *	0.16	0.36
Grade 2	-0.25 **	-0.18	-0.02	-0.19	-0.15
Mt. Clemens-Year 2					
Grade 1	0.42	0.25	0.34 **	0.11	0.28
Grade 2	0.55 *	0.42	0.45	0.36	0.43
Grade 3	-0.08	-0.21	-0.32	-0.17	-0.24
Wichita-Year 1					
Kindergarten	0.71 *	0.60 *	0.88 *	0.53 *	0.68
Grade 1	0.43 *	0.29	0.41 *	0.34	0.37
Grade 2	0.11	0.03	0.11	0.03	0.07
Wichita-Year 2					
Grade 1	0.44 *	0.57 *	0.41 **	0.52 *	0.49
Grade 2	0.30	0.26	0.14	0.21	0.23
Grade 3	-0.02	-0.12	-0.10	0.03	-0.04
Sherman-Year 1					
Kindergarten	-0.12	-0.25 **	-0.20	-0.14	-0.18
Grade 1	0.03	-0.14 **	0.11	-0.10	-0.03
Grade 2	0.18 **	-0.10	-0.02	0.03	0.02
Colorado Springs-Year 1					
Kindergarten	0.05	0.17	0.29 *	0.30 *	0.20
Grade 1	-0.27 *	-0.27 *	0.21 **	-0.04	-0.09
Grade 2	-0.16	-0.37 *	-0.05	-0.29 **	-0.22

* Statistically significant with a 5 percent chance of error.

** Statistically significant with 10 percent chance of error.

Edison claims that "statistical significance" is the basis for deciding success in the 40 grade-level comparisons featured in their Annual Report on School Performance (1977). The data presented in Table VI-2, however, show that Edison does not necessarily live up to its own standard. The term "statistical significance" refers to the numeric test used by researchers to determine the probability that individual findings are different from chance. In the Primary Reading Studies, Edison counted the following grade-level comparisons as successes when they were, in fact, statistically insignificant--that is, at least three of four subtests were statistically insignificant:

- Wichita (1997) second grade
- Mt. Clemens (1996) first grade; (1997) first grade and second grade
- Colorado Springs (1996) first grade and second grade

In Sherman , Edison, surprisingly, counted second grade as a "no success" when, in fact, there was no statistical significance to the finding. In all, only 5 grade-level comparisons in any Edison schools showed statistical significance in at least *two* of the *four* subtests.

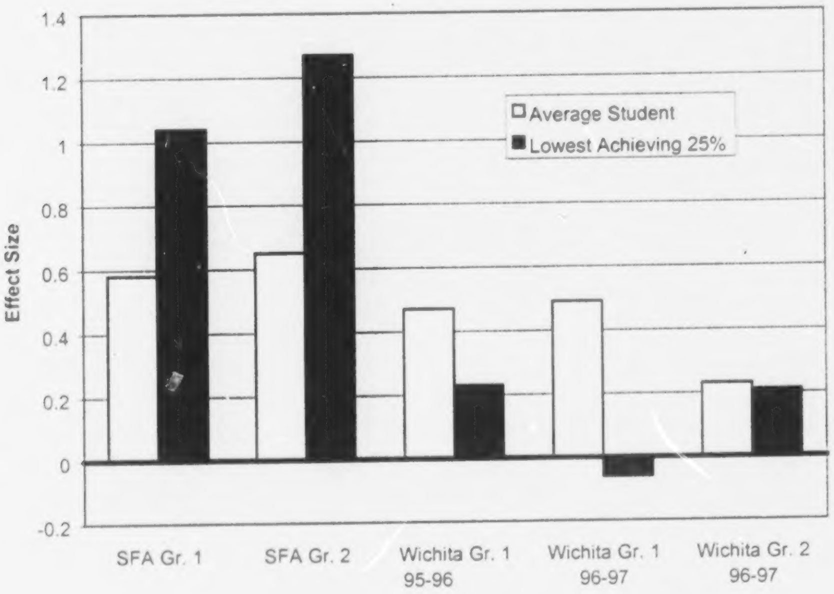
4. Changes in effect sizes over years of implementation. SFA claims that its program becomes more effective with each successive year of implementation (see the first panel of Table VI-3). This means that an incoming first grade does better in the second year SFA is in place than the first grade during year-one of the SFA program in that school, etc. There is not yet enough data to establish whether or not this pattern holds for Edison schools. As Table VI-3 shows, grade one scores in Mt. Clemens went up during the second year, and they went down in Wichita. Since no other Edison schools are currently collecting multi-year data for control-group schools, in the forseeable future, only Wichita and Mt. Clemens will allow us to reach conclusions about changes in effect size over the years.

Table VI-3
Trends in Effect Size by Year of Program Implementation

	Years Program Implementation			
	Year 1	Year 2	Year 3	Year 4
SFA Schools				
Grade 1	0.49	0.53	0.58	0.73
Grade 2	*	0.41	0.47	0.87
Grade 3	*	*	0.32	0.54
Edison-Mt. Clemens				
Kindergarten	0.48			
Grade 1	0.36	0.26		
Grade 2	-0.15 *	0.45		
Grade 3		-0.24 *		
Edison-Wichita				
Kindergarten	0.68			
Grade 1	0.37	0.49		
Grade 2	0.07 *	0.23		
Grade 3		-0.04 *		

* Not counted in SFA evaluations because students did not begin program in grade 1.
Source: Slavin, Madden & Wasik (1996); Edison Primary Reading Studies by Robert Mislevy.

Figure VI-2 Comparison of Success For All and Dodge-Edison Effect Sizes for Lowest Achieving 25 Percent



5. Low-performing students. SFA is especially effective in working with students in the bottom 25 percent of achievement, as can be seen in Table VI-4. Although Edison does not make this claim about its SFA program specifically, the company does say that it is having this kind of success with very low achievers in Wichita and elsewhere. For example, a recent *Time* article (October 27, 1997) on Edison's elementary school in Wichita asserts that "...teachers have cut in half the gap in test scores between poor and affluent children. The school made similar headway in demolishing the difference between minority and white students' performance." Recently, Edison asserted that, "Students at every level (from the highest quartile to the lowest) are making strong academic progress. Dodge-Edison [Edison's Wichita elementary school] provides the longest-term illustration, though every school shows similar patterns" (Edison press release, Dec. 15, 1997).

However, the data paint an entirely different picture about the achievement of Wichita's lowest 25 percent. The results are uniformly poor, as shown in Figure VI-2 and Table VI-4. The lowest-achieving students perform substantially below the SFA average and also below the average Edison student. Edison did not do a low-performing student analysis in any of its other schools, but since the company already has the necessary data, it could set the record straight--and reassure school districts it is courting--by performing these analyses.

Table VI-4
Effect of the Edison Project on Low-Performing Students

	K	Grade 1	Grade 2	Grade 3
Success for All Evaluation				
Number of schools		15	15	13
Number of groups		37	21	13
All SFA Students				
Adjusted Effect Size		0.58	0.65	0.53
Subtests Sig. at .05 level		4 of 4	4 of 4	4 of 4
GE-Success for All		1.9	2.7	3.5
GE-Control		1.7	2.2	2.8
Students in Lowest 25% on Pretest				
Adjusted Effect Size		1.04	1.47	1.49
Subtests Sig. at .05 level		4 of 4	4 of 4	4 of 4
GE-Success for All		1.6	2.0	2.7
GE-Control		1.3	1.6	1.9
Edison-Wichita, 1996-Students in Lowest 25 %				
Edison Students	23	22	22	
Control Students	24	25	22	
Unadjusted Effect Size	1.10	0.23	-0.21	
Subtests Sig. at .05 level	1 of 4	0 of 4	0 of 4	
GE-Edison	1.0	1.8	2.1	
GE-Control	0.8	1.6	2.2	
Edison-Wichita, 1997-Students in Lowest 25 %				
Edison Students		21	22	15
Control Students		19	17	15
Unadjusted Effect Size		-0.06	0.21	-0.22
Subtests Sig. at .05 level		0 of 4	0 of 4	0 of 4
GE-Edison		1.6	2.5	2.6
GE-Control		1.6	2.2	2.8

Source: Slavin, Madden & Wasik (1996); Edison Primary Reading Studies by Robert Mislevy.

VII. School-By-School Analysis of Student Achievement in Grades 3 to 5

Edison Project's Assessment Design

Edison's description of how it plans to assess the progress of students in its schools is straightforward and follows generally accepted procedures. In practice, however, the company sometimes presents its data in ways that tend to exaggerate test scores, and it often ignores comparisons to other schools, students, tests, and years that would render results less impressive. Here is how the company describes its assessment design:

> [D]uring the 1995-96 school year, the Edison Project's first four schools administered a variety of standardized tests and assessments to measure student achievement. These tests generally were administered in the fall and early winter and serve as baselines for evaluating student progress in the schools' second and subsequent years of operation. The initial scores show that partnership school students are beginning their Edison experience at or below national normed grade levels and state standards--not uncommon for schools such as these that serve predominantly disadvantaged populations. Testing in subsequent years will reveal how much students gained on their starting levels (http://www.aft.org/research/edisonproject/pages/edison-3-98/Docs/1995Assess.html).

In three of the first four Edison schools, the company adheres pretty closely to the procedures described here. Wichita and Boston students both took MAT/7 assessments, and Mt. Clemens students took the Michigan state assessment (MEAP) and the Iowa Test of Basic Skills (ITBS). In all three schools, the baselines were slightly lower than would ordinarily be the case. Students were taking the MAT/7 or ITBS for the first time, and test scores generally slump when a standardized test is first administered because students and teachers are unfamiliar with it. But the low baseline is not a handicap when it comes to demonstrating impressive progress. Quite the contrary--when students get used to a new test, the school can take credit for the jump in scores, even though some of the improvement would have occurred regardless of the program in place. This is a problem in any public school that switches to a new test.

Most of the other schools that opened in 1996-97 will not be able to make this important before-and-after comparison because they did not collect fall baseline data (as shown in Table VII-1). And there are some problems with baseline data in the Sherman, Texas, and Colorado Springs schools, which suggest that Edison is not averse to picking and choosing among baselines.

Sherman has no fall baseline data for the year it became an Edison school. There are, however, good data from the Texas state assessments (TAAS) administered the previous spring, and, since the Edison school essentially serves the same neighborhood and students, it would be perfectly legitimate to use these data to establish the baseline. Edison, however, preferred to do without baseline data, perhaps because the TAAS reading scores from the spring before Edison took over were approximately 20 points higher in grade 3 reading and grade 4 math than after the first year with Edison.

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The same spring data that Edison found unacceptable for Sherman passed muster in Colorado Springs. This school district tests twice a year, measuring student progress from fall to spring. But Edison chose to use the spring '95 data for the Colorado Springs baseline, which had the effect of making Colorado Springs results look better than they otherwise would.[14]

Table VII-1 shows the tests administered to Edison elementary schools open in 1995-96 and 1996-97 by the state, the district, and Edison; the grades for which we have data; the date of the baseline; and the dates of the assessments administered thus far. The column designated as baseline is either a spring test the year before Edison took over or a test in the fall of Edison's first year.

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[14] When fall testing data from Edison's second year (1997) became available, Edison began comparing fall 1996 to fall 1997 and dropped the use of the pre-Edison spring testing data (Annual Report on School Performance, 1997 http://www.edisonproject.com/annualframe.html). This fall-to-fall comparison suffers from the same problems, identified in this report (see page 69), as the spring-to-spring comparisons. Since the fall 1997 test is used by the district as a baseline for the spring test, the AFT will not present the fall testing data until spring test scores are available. Edison also administers a second standardized test (the ITBS) in December. The changes in scores between December 1996 and December 1997 are similar to the fall-to-fall changes in the district's standardized tests. The ITBS scores will be incorporated into this analysis when the school district spring test results become available.

Table VII-1
District and State Assessment for Edison Elementary Schools

				Edison Assessments		
	Grades	Baseline		First	Second	Third
School Opened Fall 1995						
Wichita						
Kansas State Assessments	3,4	Apr 95	a	Apr 96	Apr 97	Apr 98
District tests (MAT/7)	3,4,5	Oct-95		Oct-96	Oct-97	Oct-98
Mount Clemens						
State tests (MEAP)	4	Oct-95		Oct-96	Jan-98	Jan-99
Edison tests (ITBS)	3,4,5	Dec-95	b	Dec-96	Dec-97	Dec-98
Sherman						
State tests (TAAS)	3,4	May-95	c	May-96	May-97	May-98
Boston (Charter School)						
State tests (MEAP)	4	none	d	Apr-96	e	e
State tests (ITBS)	3	none			Apr-97	Apr-98
Edison tests (Stanford)	3,4,5	none		Apr-96	Spring 97	Spring 98
Edison tests (MAT/7)	3,4,5	Oct-95		Oct-96 (g)	Oct-97	Oct-98
School Opened Fall 1996						
Colorado Springs						
District tests (DALT)	3,4,5	Fall 95 to Spring 96	f	Fall 96 to Spring 97	Fall 97 to Spring 98	Fall 98 to Spring 99
Dade County						
District tests (DALT)	1,2,3,4,5	Jun-96	d	Jun-97	Jun-98	Jun-00
Lansing (Charter School)						
State tests (MEAP)	4	Oct-96		Jan-98	Jan-99	Jan-99
Edison tests (MAT/7)	3,4	none		Spring 97	Spring 98	Spring 99
Worcester (Charter School)						
State tests (ITBS)	3	none		Apr-97	Apr-98	Apr-99
Edison tests (Stanford)	3	none		Jun-97	Spring 98	Spring 99
Edison tests (Stanford)	4	none		Apr-97	Spring 98	Spring 99
Edison tests (MAT/7)	5,6,7	none		Jun-97	Spring 98	Spring 99

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a. Edison added about 50% to 1994-95 enrollment from out-of-neighborhood students. In both years, Dodge had identical racial and economic makeups.
b. Detailed data from test publisher not available to AFT.
c. As in Mt. Clemens, the Sherman school is a neighborhood school.
d. Baseline is pre-Edison scores of individual students. Study includes control group.
e. State administration of MEAP suspended after 1996; replaced with Stanford.
f. District measures progress from fall to spring, but spring to spring is also possible.
g. Tested in October, but used test form and spring national norms from previous grade.

Filling in the Outline

As already noted, there are certain problems connected with Edison's handling and presentation of test data. Some will be pointed out in discussions of individual schools, but a few general observations follow.

1. Percentile rankings overstate Edison's gains. Using national percentile rankings to measure student achievement can be misleading. Percentiles are rankings, not measures of knowledge; they can tell if one student scored better than another but not how much better. Moreover, rankings on standardized tests are especially unreliable around the 50th percentile, where a large number of students with almost the same score are bunched together in the middle of the bell-shaped curve that is characteristic of standardized tests. As a result, small changes in knowledge create big changes in percentile rankings. In many of Edison's early schools (e.g., Wichita, Mt. Clemens, and Boston), scores tend to improve from just below average to just above average, which means that all of the problems associated with percentiles come into play.

Using normal curve equivalents (NCEs) avoids these problems. They are normalized national percentile rankings, which are similar to percentiles--the mean is 50 with a range of 1 to 99. However, NCEs represent equivalent gains in knowledge, not rankings. A student would have to have the same number of correct answers to move from 35 NCEs to 45 NCES as he would to move from 45 NCEs to 55 NCEs, which is not true of percentile rankings. Because of this problem with percentiles, the federal government now allows only NCEs in Title I evaluations.

The MAT/7 scores in Wichita are a good illustration of the problem with percentiles. Wichita is the Edison school with the biggest achievement gains, and many students have moved from below average to above average (right in the middle of the bell-shaped curve). If you follow the same students from grade 3 to grade 5 over a two-year period, the change in the reading score is 12 NCEs (which is generally considered good) as opposed to the more impressive seeming 23 percentiles (see panel A in Table VII-2). The change in math is 18 NCEs (also good) rather than 32 percentiles, which sounds much better. Comparing grade 5 reading in 1995 to grade 5 reading in 1997 shows a gain of 4 NCEs compared to 8 percentiles (panel B in Table VII-2). In math, fifth graders improved by 12 NCEs, about half of the 23 percentile change. The NCEs rankings convey student results much more precisely; the percentiles can make the results sound more impressive.

Table VII-2
Difference Between Percentiles and NCEs On Wichita's MAT/7

	Reading		Math	
	%tiles	NCEs	%tiles	NCEs
	A. Diagonal Comparison			
Grade 3, 1995	39	44	39	44
To Grade 4, 1996	49	50	52	51
To Grade 5, 1997	62	56	71	62
One-Year Change	***10***	***6***	***13***	***7***
Two-Year Change	***23***	***12***	***32***	***18***
Grade 4, 1995	47	48	37	43
To Grade 5, 1996	60	55	65	58
One-Year Change	***13***	***7***	***28***	***15***
	B. Conventional Comparison			
Grade 4, 1995	47	48	37	43
Grade 4, 1996	49	50	52	51
Grade 4, 1997	53	52	63	57
Two-Year Change	***6***	***4***	***26***	***14***
Grade 5, 1995	54	52	48	50
Grade 5, 1996	60	55	65	58
Grade 5, 1997	62	56	71	62
Two-Year Change	***8***	***4***	***23***	***12***

Source: Wichita Public Schools.

Figure VII-1 MAT/7 Math and Reading Results for Current Fourth and Fifth Graders Using NCEs, With Scale Beginning at Zero

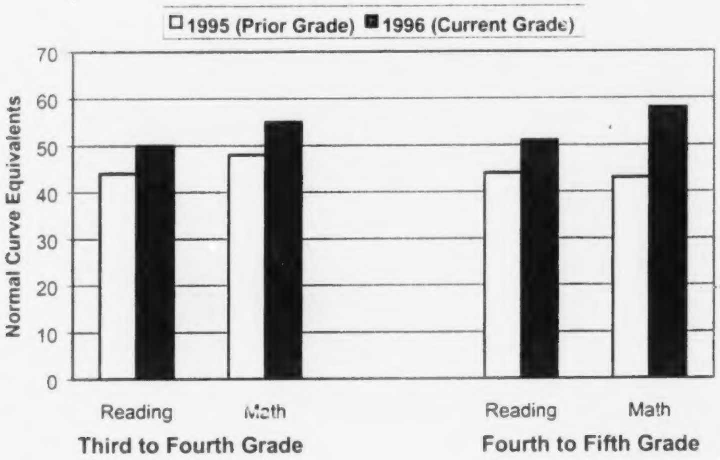
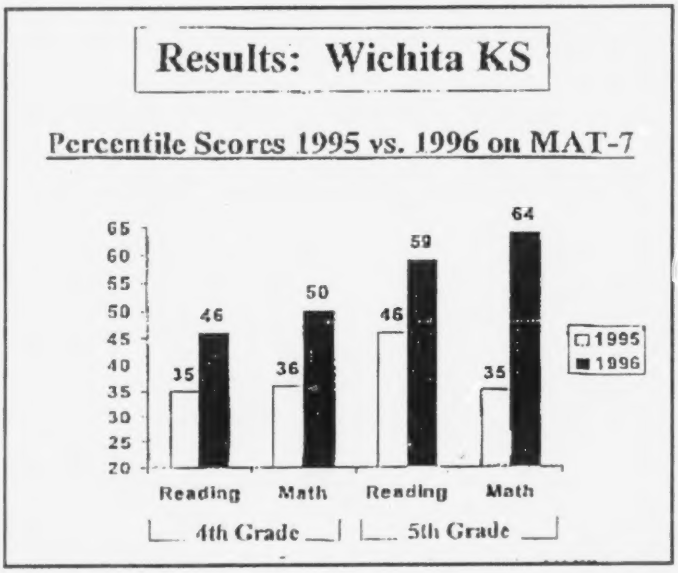


Exhibit VII


Results: Wichita KS

Percentile Scores 1995 vs. 1996 on MAT-7

In this handout used by Edison, the graphing of percentile rankings exaggerates achievement growth, which is more accurately portrayed in Figure VII-1. Starting the axis at 20, rather than 0 also exaggerates achievement growth. For example, grade 5 math scores in 1996 appear to be nearly three times larger, when the change from 35 to 64 percentiles does not even represent a doubling of the percentile rank.

2. Comparing student achievement across grade levels provides incomplete data. There are at least three ways to compare progress in the average academic achievement of groups of students over time:

- Compare the same grade in different years (e.g., all third graders in one year to all third graders the previous year).
- Compare the same cohort of students in different grades (e.g., all fourth graders in one year to all third graders in the previous year).
- Compare the same students in different grades (e.g., only fourth graders who also had third grade scores, ignoring students without both scores).

The first two ways of comparing student achievement are just different ways of looking at the same data. Almost all reports of assessment results from states or school districts use the first method--comparing the same grade in different years--which provides information on how well a particular school is doing at a particular grade level over time. One problem with this method is that every year of data contains a completely different group of students.

The second method of comparison, which is the one Edison prefers, follows the same cohort of students from grade to grade. But because students change schools all the time, this method also compares different groups of students. So in both cases, changes in student achievement reflect not only the impact of the school but also the impact, if any, of a changing student body.

The cohort method has the additional problem of providing fewer achievement comparisons because one grade is always the baseline grade. For example, if students are tested in grades 3,4 and 5, we know only what happens as students move from grades 3 to 4 and grades 4 to 5, but nothing about grade 3. Analyzing trends over a period of more than one year also becomes very problematic and negates most of the advantages of comparing students as they move from grade to grade. For example, if students moving from grades 3 to 4 in one year are compared to students moving from grade 3 to 4 in the previous year, you are comparing two completely different groups of students, just as you do with the first method.

However, if student achievement data are presented for all years and all grade levels, then the reader is free compare data both ways. Tabular data in this report are always presented in this way. Edison testing data, however, are usually limited only to the second method, forcing readers to look at the data in only one way. Panel A of Table VII-2 replicates Edison's preferred way of showing student achievement data: by comparing grade 5 test results to grade 4 results from the previous year. Panel B of Table VII-2, which compares fourth grade scores and fifth grade scores in three different years, indicates less progress in student achievement.

Comparing only those students with test scores in two consecutive years (i.e., testing exactly the same students over time), which is the third comparison method bulleted above, has a lot of intuitive appeal. When Edison compares student achievement across grade levels, it has been very unclear about whether or not it is limiting the comparison to exactly the same students or to the same cohort of students as it progresses from one grade to the next. Based on test publisher's data analyzed by the AFT, it appears that Edison generally compares the same cohort of students across grade levels rather than exactly the same students.[15]

3. When there are no control schools, the context for interpreting test results is inadequate. Although Edison's Primary Reading Studies assessed student progress in relation to a control group of similar students, Edison generally compares results for its students only to national norms on norm-referenced tests and to state averages on state assessments. The problem with this is that states and most school districts always find a way to do better than the national average. (This is the so-called Lake Wobegon effect, named after the mythical town "where all students are above average.") So careful comparisons also look at achievement patterns in similar schools, which form control groups. The University of Maryland-Baltimore County (1995) evaluation of Education Alternatives, Inc. (EAI), in Baltimore revealed the importance of comparison schools. On surveys of teachers, parents and students, EAI looked as though it was doing superior work, but the survey results for a set of demographically similar control schools showed that satisfaction with EAI was no better than satisfaction in the control schools.

One exception to Edison's general practice in this regard is Mt. Clemens. There are only two elementary schools in the district, and Edison makes comparisons to the non-Edison school and the state average. However, outside of the Primary Reading Studies, Edison provides no data on the comparability of the two schools with respect to student characteristics. Also, Edison compares the grade 3 state reading assessments of its two charter schools in Massachusetts to school district averages in Boston, Chelsea, Somerville, Lowell, Brockton, and Worcester. In Colorado Springs, Edison compares its school to the district average but not to other similar schools.

4. "Neighborhood magnet" data, unless analyzed separately, skew results. The Edison schools in Wichita, Mount Clemens, Sherman, and Colorado Springs are partly magnet schools. Dade County is one of three neighborhood elementary schools residents can choose, but it is not a district-wide magnet. The other Edison schools are charter schools. As already noted in connection with the Primary Reading Studies (see p. 14), admission by lottery may eliminate school selectivity, but, as studies of magnet schools have shown, it does not eliminate self-selection by parents who choose to apply. Parents who make the effort to get their child into a specific school outside of their neighborhood are likely to be more involved with their child's education and school.

Experiences in Wichita, Sherman, Colorado Springs, and Mt. Clemens also suggest that self-selection tends to decrease the percentage of students eligible for free or reduced-price lunch. In Mt. Clemens, the percentage dropped from 59 to 48 percent, and in Wichita it has declined over two years from 76 to 64 percent.[16] This, in turn, is likely to produce a rise in test scores.[17]

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[15] Despite its intuitive appeal, comparing exactly the same students is a very problematic procedure. National norms are based on a representative sample of students, not a select group of students who stayed at the same school for at least two years. Precisely because students who leave and enter the school are eliminated from the test-score comparison, the use of national norms (as a comparison measure) is inappropriate. Another problem is that when some students who do not do well leave the school, their absence the following year is likely to contribute to higher average test scores because those unsuccessful students are eliminated from the analysis.

The remainder of Section VII examines student achievement in each of the first four Edison schools. The section also assesses early evidence in Dade County and Colorado Springs. Testing data come from the Edison Project, school district officials, and state governments. Generally, testing data provided by Edison to the AFT were backed up with detailed reports from test publishers.

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[16] See page 29 for more details about decreases in the number of students eligible for free and reduced-price lunch in Edison schools.

[17] In 1995-96, it was reported on the Massachusetts Department of Education Web page that nearly 40 percent of the Boston charter school students came from private schools, which is obviously another measure of self-selection.

A. Dodge-Edison in Wichita

Everybody likes a success story--and the more dramatic the better. So it should be no surprise that articles about Edison's elementary school in Wichita (and Edison's own promotional materials) tend to exaggerate both the sorry state of the school before Edison took over and the degree to which Edison has turned it around.

An article in *Time* (Oct. 27, 1997) describes the pre-Edison elementary school as being in "…sad shape, plagued by some of the lowest grades and worst attendance." The *New York Times* (Dec. 15, 1997), in the same vein, pictures Edison's elementary school in Wichita as a "squat tan-and red-brick elementary school off a dirt road," where "3 out of 4 students are living at the poverty level." And an Edison news release (Dec. 15, 1997) touts big improvements in student achievement:

> Students have posted dramatic gains in reading and math on the Metropolitan Achievement Test (MAT/7). These first two-year gains come from Dodge-Edison Elementary School where students who have been at Dodge for two years have gained more than 25 percentiles against national norms in reading and math.

However, the school that became Edison's Wichita elementary school was not exactly what *Time* or the *New York Times* describes--and, if one looks at the test results in the way most researchers would, they are promising rather than "dramatic."

Notwithstanding the impression of shabbiness conjured up by the *New York Times* quotation, the school is a relatively new facility for Wichita, and it is one of the few schools in the district with air conditioning. Pre-Edison, it enrolled about 300 neighborhood students and housed a special education center that brought the enrollment up to about 400. Contrary to the *Time* article, the average daily attendance of 94.5 percent in the year before Edison took over matched the state average.

Today, Edison's Wichita elementary school enrolls about 600 students, and there is no special education center. Sixty-nine percent of the students qualify for free or reduced-price lunches. And while the student body is certainly poor, the impression of abject poverty created by *Time* and *Newsweek* is exaggerated. In fact, one in three Wichita schools has a higher percentage of free-lunch students than Edison, and, as mentioned earlier, the Edison school is in danger of losing the Title I federal funding it gets for serving disadvantaged students as a schoolwide project (http://www.aft.org/research/edisonproject/support/wichita/lunch.htm).

As for the gain in test scores, Table A1 shows that the Edison school started off 3 NCEs behind the district in reading in grades 3 to 5, and after two years under Edison, it is 2 NCEs ahead of the district. In math, it started 2 NCEs behind the district average and after 2 years is now 7 NCEs ahead of the district. Compared to the district, these gains are small in reading and moderate in math. But to interpret them properly, we need to consider several other factors that Edison does not acknowledge.

Table A1
District Assessment Data in Wichita

			Neighborhood Schools				Neighborhood Magnets		
	Wichita	**Dodge-Edison**	**Caldwell**	**Colvin**	**Jefferson**	**Payne**	**Washington**	**Kellogg**	**Ingalls**
% Minority		34%	69%	56%	37%	34%	70%	31%	64%
% Free Lunch (96-97)		76%	84%	92%	85%	81%	75%	63%	69%
% Free Lunch (97-98)		69%	81%	90%	76%	82%	91%	68%	na
Teachers/100 students		5.01	7.15	5.9	5.63	5.29	6.10	5.33	5.77
MAT7 Reading (NCEs)									
Grade 3, Fall 1995	50	44	53	39	41	41	59	54	45
Grade 3, Fall 1996	51	48	46	48	40	48	58	48	54
Grade 3, Fall 1997	52	59	51	39	47	46	43	58	na
Change	***2***	***15***	***-2***	***0***	***6***	***5***	***-16***	***4***	***9***
Grade 4, Fall 1995	51	48	47	41	47	40	55	57	48
Grade 4, Fall 1996	52	49	44	39	46	50	57	61	53
Grade 4, Fall 1997	53	51	51	40	48	45	51	60	na
Change	***2***	***3***	***4***	***-1***	***1***	***5***	***-4***	***3***	***5***
Grade 5, Fall 1995	53	52	51	46	41	39	59	69	52
Grade 5, Fall 1996	54	55	47	44	54	48	62	54	57
Grade 5, Fall 1997	54	55	47	43	51	55	59	60	na
Change	***1***	***3***	***-4***	***-3***	***10***	***16***	***0***	***-9***	***5***
MAT7 Math (NCEs)									
Grade 3, Fall 1995	46	44	44	43	43	41	54	61	39
Grade 3, Fall 1996	50	54	43	50	41	43	60	50	57
Grade 3, Fall 1997	50	61	53	37	51	50	35	59	na
Change	***4***	***17***	***9***	***-6***	***8***	***9***	***-19***	***-2***	***18***
Grade 4, Fall 1995	47	43	50	41	44	43	55	58	48
Grade 4, Fall 1996	50	51	43	43	47	53	53	55	50
Grade 4, Fall 1997	51	57	51	43	48	50	50	65	na
Change	***4***	***14***	***1***	***2***	***4***	***7***	***-5***	***7***	***2***
Grade 5, Fall 1995	52	50	47	43	47	37	55	66	52
Grade 5, Fall 1996	53	58	45	41	51	50	60	54	59
Grade 5, Fall 1996	56	60	50	43	46	60	66	56	na
Change	***4***	***10***	***3***	***0***	***-1***	***23***	***11***	***-10***	***7***
MAT7 Reading (NCEs)									
Grades 3-5, Fall 1995	51	48	50	42	43	40	58	60	48
Grades 3-5, Fall 1996	52	51	46	44	47	49	59	54	55
Grades 3-5, Fall 1997	53	55	50	41	49	49	51	59	na
Change	***2***	***7***	***-1***	***-1***	***6***	***9***	***-7***	***-1***	***6***
MAT7 Math (NCEs)									
Grades 3-5, Fall 1995	48	46	47	42	45	40	55	62	46
Grades 3-5, Fall 1996	51	54	44	45	46	49	58	53	55
Grades 3-5, Fall 1997	52	59	51	41	48	53	50	60	na
Change	***4***	***14***	***4***	***-1***	***4***	***13***	***-4***	***-2***	***9***

Source: School reports on WPS Web page, and information provided by school district officials.

1. Effects of new testing program. Some of the gain on the MAT/7 can probably be attributed to an effect that is well-known among researchers. After an initially poor showing on a new test, scores usually move upwards; and progress against national norms can occur merely because teachers and students become familiar with the tests. Even if one factors in the upward drift, Edison students did well. Nevertheless, their performance needs to be compared to district-wide scores and scores in control schools in order to separate out the gains that are unrelated to the Edison program.

2. Comparison to similar neighborhood schools. Edison's usual practice is to compare achievement in its schools to national norms only, but for a more precise evaluation, we should compare results in Edison schools with those in similar neighborhood schools. If that is done in Wichita, some of the advantage that Edison's Wichita school seems to have disappears. Caldwell, Colvin, Jefferson, and Payne are demographically similar neighborhood schools that receive Title I funding for disadvantaged pupils (see http://www.usd259.com/elementary/elementary.html for school profiles).[18] All have the same or a larger proportion of minority children than Edison's Wichita school, and all have a higher percentage of the student body getting free or reduced-price lunch. Payne differs from the other three control schools because, during the past two years (which also mark Edison's involvement in Wichita), Payne, like Edison, has had a longer school year, and it has benefited from extra resources for technology. Unlike Edison, however, it remains a neighborhood school.

Results in the control schools are mixed. Over the two years between 1995 and 1997, Payne improved a little bit more than Edison in reading--9 NCEs compared to Edison's 7 NCEs--and a little bit less in math—13 NCEs compared to Edison's 14 NCEs. Colvin, on the other hand, showed small losses in both math and reading. Caldwell and Jefferson improved in math as much as the district average (4 NCEs) but considerably below Edison, and Jefferson showed gains in reading of 6 NCEs, close to Edison's.

3. Comparison to neighborhood magnet schools. Edison is really a neighborhood magnet school because a large number of its students come from outside school boundaries. Ingalls, Washington, and Kellogg are also neighborhood magnet schools, and in 1996-97, all three schools had lower percentages of students eligible for free or reduced-price lunch than Edison. But while Edison's percentage declined, theirs rose. At Washington, the percentage of students qualifying for free lunch increased from 75 to 91 percent and at Kellogg from 63 to 68 percent; at Edison, the percentage declined from 76 to 69 percent. Since, on average, achievement declines as the percentage of students eligible for free or reduced-price lunch increases, this information about student population needs to be factored in to any comparison between Edison and other neighborhood magnets.

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[18] The aborted Wichita State University evaluation 1996 identified eight anonymous control schools. The control schools used here--Caldwell, Colvin, Jefferson, and Payne--were the four schools identified by the school district for a subsequent evaluation, which also did not take place.

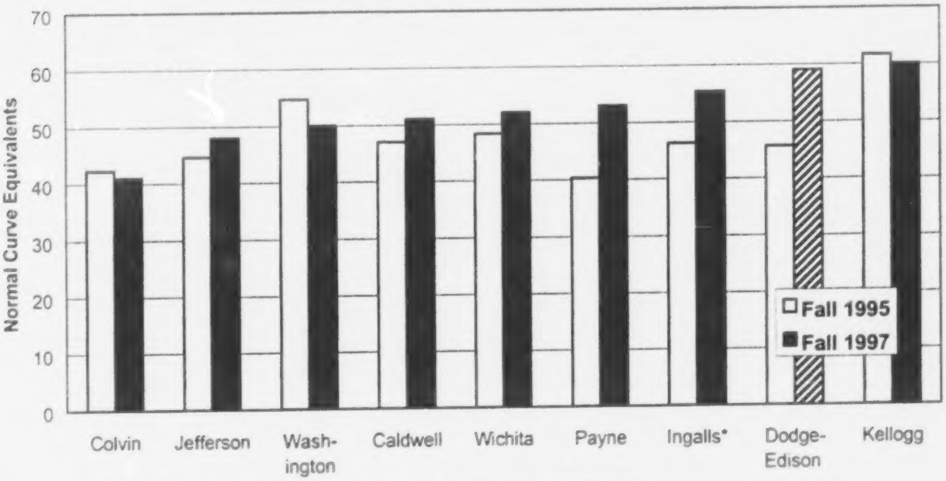

Figure A1 -- Math Achievement on MAT/7 In Wichita for Dodge-Edison and Control Schools, Grades 3-5

* One-year trend. School abolished and replaced with Ingalls-Edison

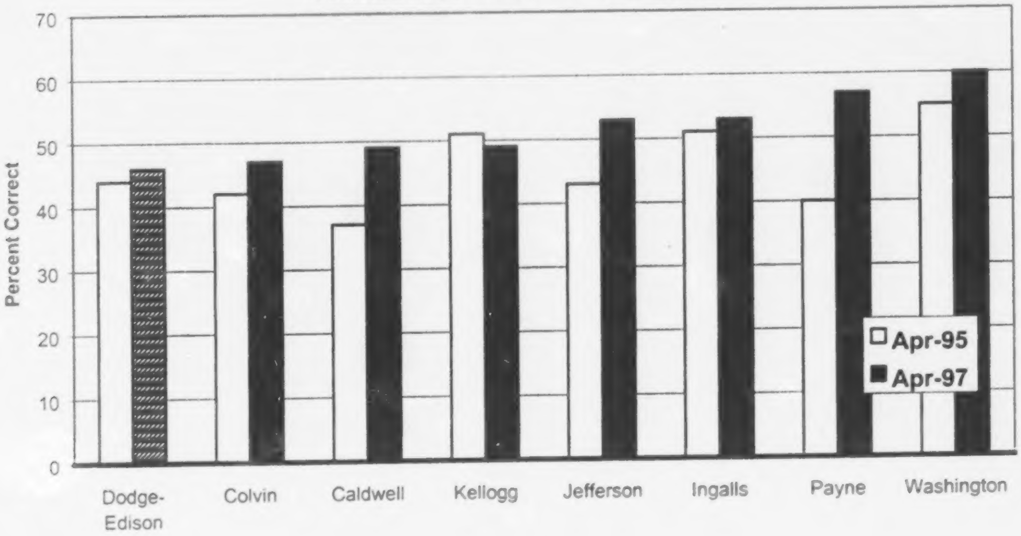

Figure A2 -- Kansas State Grade 4 Math Assessment, Two-Year Trends at Dodge-Edison and Control Schools with Comparable Free/Reduced Price Lunch Students

Washington showed a decline in student achievement over this two-year period, and Kellogg stayed about the same. However, both schools have been performing at relatively high levels for several years. It's likely, in Washington's case, that the fall-off in achievement is associated with the steep rise in the percentage of students qualifying for free or reduced-price lunch over the same time period. Ingalls was abolished at the close of 1996-97 and reopened as the second Edison elementary school in Wichita. Ironically, during its next-to-last year of operation, from fall 1995 to fall 1996, Ingalls improved math achievement as much as Edison, and it improved in reading about the same rate as Edison. The new Edison school replaced a program that was already effective and was getting better.

4. Kansas State assessment program. There is another important source of information about achievement in Edison's first Wichita school, but the company has largely ignored it. In its first end-of-year report, Edison wrote that the Kansas State Assessments have provided useful findings and "baselines for year-two growth studies," but the company is very selective about which data it reports. According to the company:

> First-year data indicated achievement typical of similar students. Only one of the state assessments, writing, was administered late enough in the school year (March) to provide evidence of first-year progress. Fifth graders at Dodge-Edison this year outperformed fifth graders at Dodge last year. But changes in the student population make it impossible to know whether these gains reflect additional learning or not.

Edison's Annual Report on School Performance (1997) indicates that Edison students also increased their writing scores during the second year of operation. However, Edison's failure to talk about other test data from the state assessment program distorts the picture of student achievement. It's true that the state reading tests for third graders and math tests for fourth graders, given in March and April 1996 and 1997, do not fully represent the impact of Edison over two full years. However, they provide a nearly complete two-year progress report, which shows no improvement in Edison's first year and a little improvement in the second.[19]

As indicated in Table A2, Edison shows a four-point improvement in expository reading compared to the pre-Edison year of 1995, and a two-point gain in math (see Figure A2). This showing is particularly feeble when you consider that the pre-Edison student body contained more minority students and had a slightly larger population qualifying for free lunch. Moreover, pre-Edison Dodge was a neighborhood school, not a neighborhood magnet school, and therefore did not benefit from the self-selection that characterizes the families whose children attend magnet schools.

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[19] Although Edison includes the writing test of the Kansas State Assessments in its Annual Report on Student Achievement (while excluding and not even mentioning the reading and math tests), AFT has excluded the results from this report. When AFT asked the Wichita public schools for data on the Kansas State Assessments, no data were provided for the writing assessment. A school-district official indicated that the state writing assessment is given every other year and is scored by state-level personnel. However, Wichita also gives the assessment in alternate years. Alternate-year assessments are scored by school-level and district-level teams, and the scores are then averaged. The school district considers these scores to be for internal school use only and discourages the kind of use Edison made of them in its public report. Also, according to a district official with whom AFT spoke, the school-level scoring was much higher at the Edison school than the district scoring. Because the validity of the scoring is questionable and because we have no data on other Wichita schools, Edison's scores on the Kansas writing assessments do not appear in our report.

Table A2
Kansas State Student Achievement Data In Wichita

				Neighborhood Schools				Neighborhood Magnets		
	State	**Dodge 94-95**	**Dodge Edison**	**Caldwell**	**Colvin**	**Jefferson**	**Payne**	**Washington**	**Kellogg**	**Ingalls**
Enrollment		415	599	403	701	279	410	369	280	515
% Minority		39%	34%	69%	56%	37%	34%	70%	31%	64%
% Free Lunch (96-97)		79%	76%	84%	92%	85%	81%	75%	63%	69%
% Free Lunch (97-98)			69%	81%	90%	76%	82%	91%	68%	79%
Average Daily Attendance		94%	na	94%	94%	92%	93%	95%	94%	
Teachers/100 students		5.82	5.01	7.15	5.9	5.63	5.29	6.1	5.33	5.77
Third Grade Expository Reading (Percent Correct)										
March, 1995	64	50		54	51	51	46	45	62	49
March, 1996	64		51	59	50	52	58	58	59	51
March, 1997			54	60	70	54	53	65	64	62
Two-Year Change			*4*	*6*	*19*	*3*	*7*	*20*	*2*	*13*
Third Grade Narrative Reading (Percent Correct)										
No test in 1995			na	na	na	na	na	na	na	na
March, 1996			46	62	48	46	55	55	59	52
March, 1997			52	60	70	55	48	61	62	58
One-Year Change			*6*	*-2*	*22*	*9*	*-7*	*6*	*3*	*6*
Math-Fourth Grade Power (Percent Correct)										
April, 1995	54	44		37	42	43	40	55	51	51
April, 1996	56		44	58	50	50	50	53	53	48
April, 1997			46	49	47	53	57	60	49	53
Two-Year Change			*2*	*12*	*5*	*10*	*17*	*5*	*-2*	*2*

Source: School reports on WPS web page and information provided by school district officials.

The comparison between Edison and the four neighborhood schools and three neighborhood magnet schools on the Kansas State Assessments is far from impressive, as Table A2 shows. By March 1997:

- Six of the seven schools had the same or better scores on expository reading, and Payne was only one point behind Edison.
- Six of the seven schools had better scores on narrative reading.
- All seven comparison schools scored better in math.
- Over 2 years, five of the seven comparison schools improved their expository reading scores more than Edison.
- In narrative reading, four of the seven comparison schools showed equivalent or greater improvement than Edison.
- In math, only one of the seven schools improved at a rate lower than Edison.

The *Wichita Eagle* also called attention to the discrepancy between results for MAT/7 and the Kansas State Assessments (Dec. 26, 1997): "…numerous non-Edison Wichita elementary schools are doing as well or better than Dodge on the tests that count the most in Kansas: the assessment that the state uses to accredit schools."[20]

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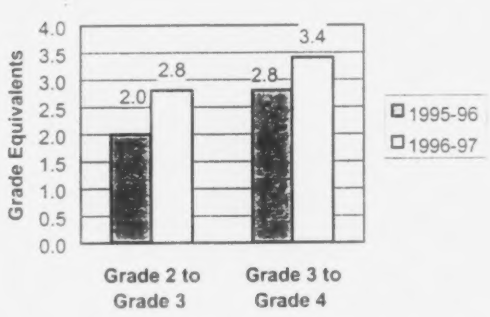
[20] One explanation for the relatively poor showing in math on the state assessments in comparison to the strong gains in math on the MAT/7 (see Table A1) could be Edison's use of frequent practice tests similar to the MAT/7. Wichita State evaluators wanted to examine test-taking practices at a set of control group schools to see if Edison's "teaching to the test" was comparable to practices in other Wichita schools. However, the district refused to fund the continuation of the Wichita State evaluation, so the issue of teaching to the test at the Wichita Edison school cannot be resolved.

Exhibit A - Inconsistent Academic Gains

At Dodge-Edison, Big Gains on the MAT/7 for Third, Fourth and Fifth Graders . . . Over two years, reading scores improved by 7 NCEs, and math scores jumped by 14 NCEs. The 1997 scores surpass the national mean of 50, and are now comparable to Washington and Kellogg, two other neighborhood magnet schools with similar students. Wichita averages 53 in reading and 52 in math.

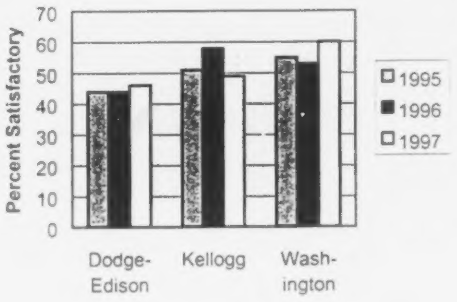
Note: Fall-to-fall testing means that grade 3 scores reflect learning in grade 2, grade 4 reflects grade 3 progress, and grade 5 reflects grade 4. SFA results for fourth graders shown below describe the grade 3 reading study from the prior year. The Kansas state math test for fifth graders refers to the prior year's grade 4 test.

	Reading				Math			
	1995	**1996**	**1997**	**Gain**	**1995**	**1996**	**1997**	**Gain**
Grade 3	44	48	59	15	44	54	62	18
Grade 4	48	49	52	4	43	51	57	14
Grade 5	52	55	56	4	50	57	62	12
Total -Edison	48	51	55	7	46	54	60	14
Washington	58	59	51	-7	55	58	50	-5
Kellogg	60	54	59	-1	62	53	60	-2



. . . But Third and Fourth Graders Fell Behind in the Primary Reading Studies. Despite above average scores on the MAT/7, the *Success for All* primary reading studies indicate that fourth graders performed below grade level and failed to gain one full year. Third graders also failed to keep pace and score at grade level.

. . . And Math Scores of Fifth Graders on the Kansas State Assessment Lag Behind the State Average. The state average is 60 percent correct compared to 46 percent at Dodge-Edison. While showing superlative gains on the MAT/7, fifth graders have not improved on state assessments and score lower than students at such comparable neighborhood magnet schools as Kellogg and Washington.

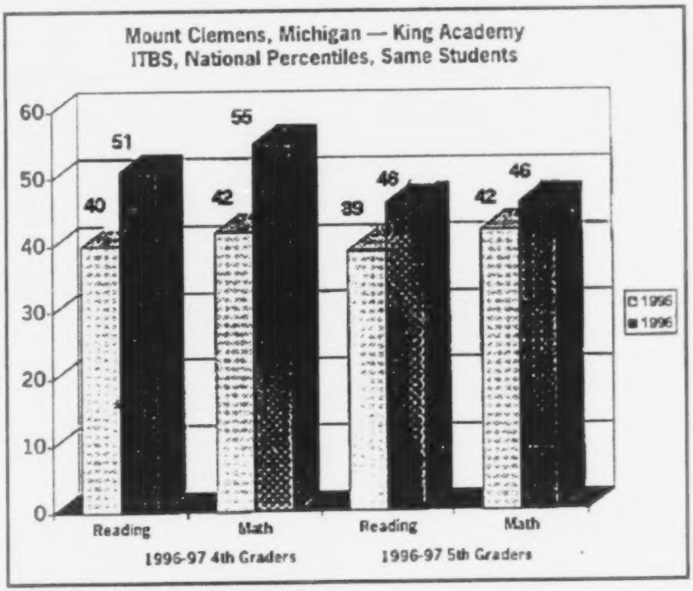


B. King Elementary School in Mt. Clemens, Michigan

In describing results at the Edison elementary school in Mt. Clemens, the company points proudly to results on the Iowa Test of Basic Skills (ITBS), a nationally normed, standardized test. The third graders in fall 1995 went from the 42nd percentile in math to the 55th percentile the following fall when they were in fourth grade (gaining about 7 NCEs). Reading improved from the 40th to the 51st percentile from grade 4 in 1995 to grade 5 in 1996 (for a gain of about 5 NCEs).

An Edison chart, reproduced as Exhibit B1, tells this story graphically, and the story is a commendable one. It is therefore puzzling that Edison exaggerates its record by characterizing the first-year gains as "large" when they would only be "small to moderate" by Success for All standards (see table on p.27), and it also stretches the truth somewhat in saying that these gains are "corroborated by the state assessment, MEAP" (Annual Report on School Performance, 1997 http://www.edisonproject.com/annualframe.html).

Exhibit B1



Source: Edison Project handout.

1. Iowa Test of Basic Skills. But Edison's presentation of Mt. Clemens's performance on the December 1996 ITBS is highly selective. It ignores poor ITBS results in third-grade math and reading--scores in the second year *fell* by 6 or 7 NCEs (see table B1). It also fails to show that there was little improvement in fifth-grade math between December 1995 and December 1996 (see figure B1). Nor would you know that Edison students in third and fifth grades performed well below the national average in both years. In fact, Edison's chart is like a photo that has been cropped to display the image in the most flattering way--accepted practice in photography but not in the presentation of data. Table B1 gives a fuller picture of progress in math and reading and also incorporates ITBS data measuring the second year of progress at Mt. Clemens.

Table B1
Iowa Test of Basic Skills, Mt. Clemens

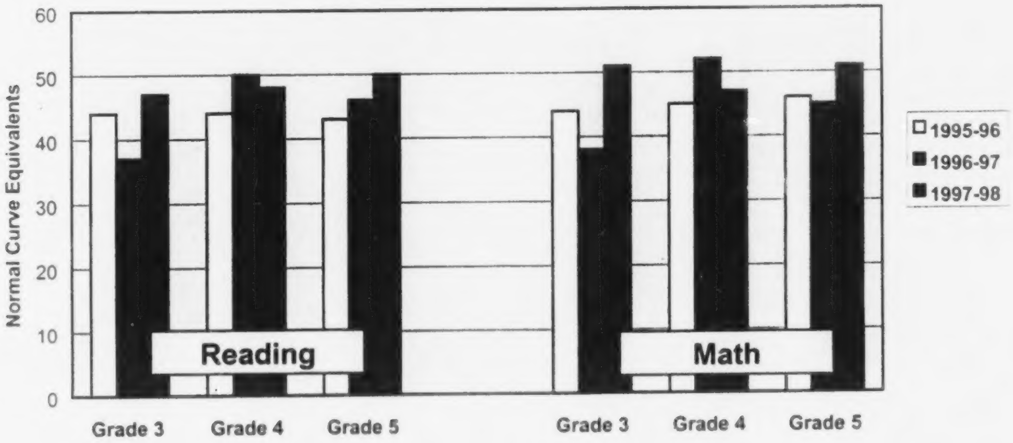
	Reading			Math			Language		
	1995	1996	1997	1995	1996	1997	1995	1996	1997
Normal Curve Equivalents (NCEs)									
Grade 3	44	37	47	44	38	51	40	35	40
Grade 4	44	50	48	45	52	47	38	41	40
Grade 5	43	46	50	46	45	51	36	38	44
Change Since 1995 (NCEs)									
Grade 3		-7	3		-6	7		-5	0
Grade 4		6	4		7	2		3	2
Grade 5		3	7		-1	5		2	8
Number of Students Given ITBS									
Grade 3	85	79	69	82	73	67	79	72	70
Grade 4	66	87	69	63	85	65	65	85	69
Grade 5	58	85	59	49	85	57	40	84	59
Enrollment									
Grade 3		80	79		80	79		80	79
Grade 4		87	86		87	86		87	86
Grade 5		83	84		83	84		83	84
Percent of Enrollment Tested									
Grade 3		99%	87%		91%	85%		90%	89%
Grade 4		100%	80%		98%	76%		98%	80%
Grade 5		102%	70%		102%	68%		101%	70%

Source: Edison Project. Students are tested in December and NCEs are based on winter norms.

* Figures add to more than 100% because the data are drawn from two different Edison sources.

Over the two years from December 1995 to December 1997, Edison students improved by as little as 2 NCEs in fourth-grade math to as much as 7 NCEs in fifth-grade reading (Table B1). Third and fifth graders improved in the second year while fourth graders fell back a little.

Figure B1--Two-Year Change in Math and Reading (ITBS) In Mount Clemens



Source: Test publisher's data provided by the Edison Project

There is another problematic feature of the ITBS tests at Mt. Clemens, which were administered by Edison (the school district has no standardized testing program). As Table B1 shows, the number of students tested in grades 4 and 5 fell sharply between 1996 and 1997. In 1996, all fifth graders were tested in math; the next year, only 68 percent were tested. In third grade, only 85 percent were tested in math, and in the fourth grade only 76 percent.

If, as is the case in many school districts, the children excluded were special education students or students with limited proficiency in English, their exclusion should have tended to raise test scores. But whatever the reason they did not take the test in 1997, the sharp decline in the percentage of students tested in math in 1997 (compared to 1996) raises serious questions about testing protocol and testing results.

2. Michigan Educational Assessment Program. Finally, Edison's reporting of fourth-grade gains on the Michigan state assessments (MEAP) in reading and math between 1995 and 1996 is odd, to say the least. On the one hand, Edison's statement comparing the two schools is clearly talking about the *net differences* between them:

> [C]hanges in MEAP scores of fourth graders from 1995 to 1996 exceeded those of other district[21] fourth graders by 12 percentiles in math and 10 percentiles in reading, and of fourth graders statewide by .5 and 7 percentiles in math and reading respectively (Edison's Annual Report on School Performance, December, 1997 http://www.edisonproject.com/annualframe.html).

And that's accurate enough. On the other hand, the chart Edison uses in its presentations to illustrate the point (Exhibit B2) misleadingly implies that Mt. Clemens made a 10-point gain in reading (the gain was 6 points but the control school lost 4 points) and a 12-point gain in math (Edison *declined* 2 points, but the control school declined 14 points). Presenting the data as Edison does in Exhibit B2 puts the best possible spin on mixed results. Not only does it make the reading gains look bigger; it also obscures the fact that Edison's fourth graders lost ground in math.

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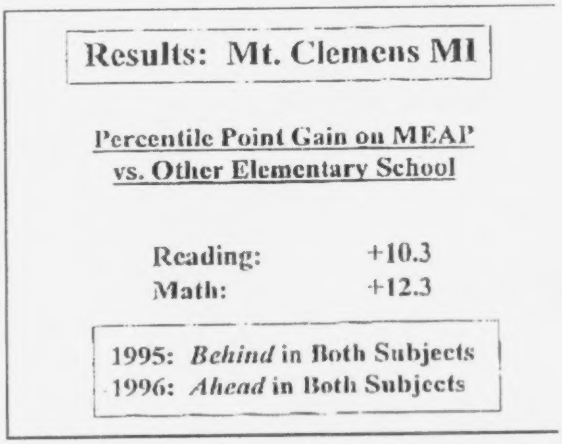
[21] The Mt. Clemens district has only two elementary schools.

Exhibit B2



Results: Mt. Clemens MI

Percentile Point Gain on MEAP vs. Other Elementary School

Reading: +10.3
Math: +12.3

1995: *Behind* in Both Subjects
1996: *Ahead* in Both Subjects

This chart shows how Edison describes the MEAP results to the public. The reference to change in test scores is misleading because reading scores only improved 6 points and math declined 2 points. See text for details.

Figure B2 gives an accurate picture of the fourth-grade math results by graphing them. Also, by presenting data about Michigan state averages and about achievement in 1994, before the school was managed by Edison, it adds two more points of comparison.

Figure B2 -- Change in Grade 4 MEAP Math Using Graph to Show Changes

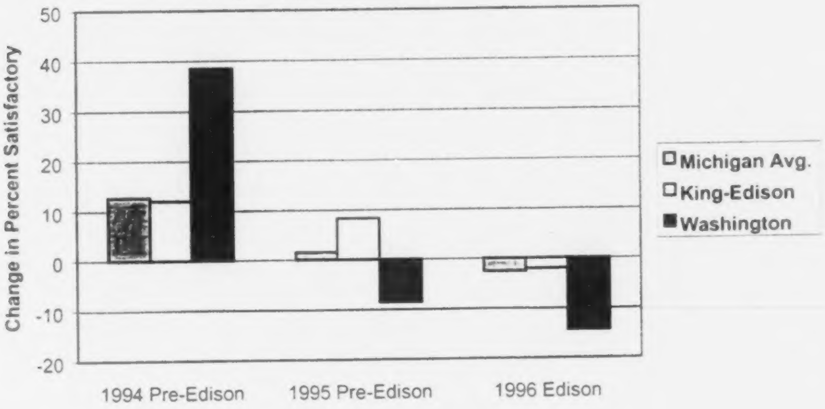
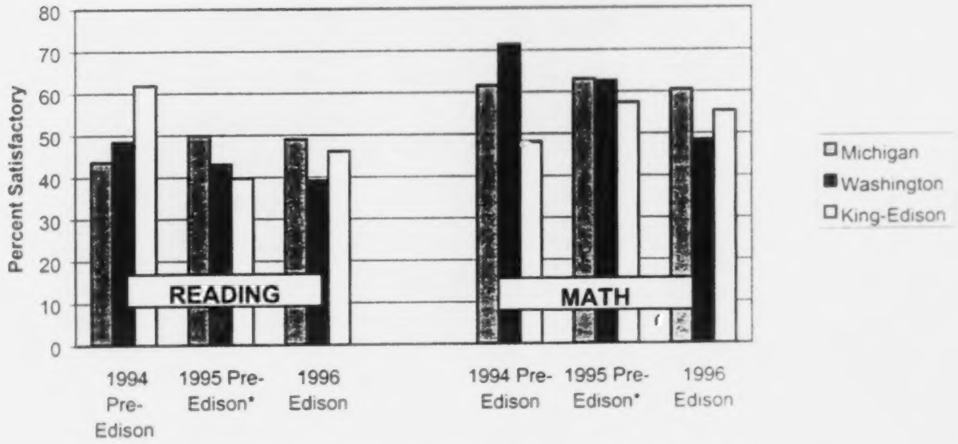


Figure B3 -- Grade 4 MEAP Results For Mt. Clemens Elementary Schools



* Edison began operation in fall 1995, but the MEAP, which is taken in the fall describes achievement from the previous year.

Figure B3 puts Edison's performance into a larger district and state perspective. It shows that while the percentage of students doing math at the satisfactory level declined during Edison's first year (1996), it had increased in previous years by substantial margins (see also Table B2). On the other hand, reading scores declined precipitously from 60 percent satisfactory in fall 1994 to less than 40 percent satisfactory in fall 1995 (see figure B3). Edison restored 6 percentage points in its first year of operation, but reading performance was still lower than the year before Edison. Michigan has changed the MEAP from a fall test to a January test, and new results will be available in summer 1998.

The grade 5 science and reading tests have now been given twice, allowing an assessment of how well Edison is doing compared to other schools in the district and the state average, as well as how much achievement has improved during the Edison program's second year. Spring 1996 is the first time that the fifth-grade tests have been given in Michigan, so there is no good baseline data on which to assess the effect of Edison's first year. However, these tests show somewhat better performance by the control school. Both schools performed well below the state average in science in 1996. The control school nearly caught up with the state average in 1997 while the Edison school showed no improvement. Only 20 percent of Edison students performed satisfactorily in 1997. On the writing test, the control school performed better than Edison in 1996, but both schools had about 69 percent of their students performing at the satisfactory level in 1997--almost equal to the state average.

Table B2
State Assessments (MEAP) In Michigan and Mount Clemens
Grade 4

	Pre-Edison			Edison
	1993	1994	1995*	1996
Enrollment				
Edison		484	490	508
Washington		511	529	504
Percent Free Lunch				
Edison		59%	48%	48%
Washington		54%	52%	55%
Expenditures Per Pupil				
Edison		$4,499	$5,789	
Washington		$5,173	$5,662	
Grade 4 Math (Fall)-Percent Satisfactory				
Michigan Average	48.9	61.6	63.1	60.5
Edison	37.1	49.1	57.4	55.3
Washington	32.9	71.4	62.8	48.4
Grade 4 Reading (Fall)-Percent Satisfactory				
Michigan Average	43.6	43.6	49.9	49.0
Edison	35.9	61.8	39.7	46.1
Washington	25.6	46.4	43.0	39.1
Grade 5 Science (Spring)-Percent Satisfactory				
Michigan Average			36.9	36.8
Edison			20.4	20.3
Washington			24.2	35.6
Grade 5 Writing (Spring)-Percent Satisfactory				
Michigan Average			55.6	73.4
Edison			40.4	68.9
Washington			51.6	69.0

Source: Michigan Department of Education, http://www.mde.state.mi.us/reports/meap/

* Edison began operation in fall 1995, but the MEAP, which is taken in the fall, describes achievement from the previous year.

In analyzing the results, we should also keep in mind that Edison had an advantage that is not related to its academic program. As already noted above, the percentage of students qualifying for free lunch dropped from 59 percent before Edison to 48 percent under Edison, demonstrating that Edison had a somewhat less disadvantaged population than the pre-Edison King Academy.

C. Washington Elementary in Sherman, Texas

The Edison Project has been remarkably quiet about its school in Sherman, Texas, which opened in 1995. At the end of the first year, the company's Web site said only that data measuring Sherman's academic growth would be available the following June. In its 1997 Annual Report on School Performance (http://www.edisonproject.com/annualframe.html), Edison said that, while student achievement dropped in the third grade, there were improvements in both fourth and fifth grades. Viewed over the entire two-year period between September 1995 and June 1997, however, the results at Sherman are considerably less promising than these statements indicate.

During Edison's first year, reading scores on the Texas state assessment (TAAS) declined sharply in third grade, and so did fourth-grade math scores. Edison subsequently improved math scores in grade 4, but second-year scores were still below what they were before Edison took over. During the second year, grade 3 reading scores stayed about the same, and math declined further. Fourth-grade reading rose in both years. However, scores in all grades were well below the state average, as well as the group of demographically comparable schools from across Texas established as control schools by the Texas Education Agency (the "Texas control group").[22]

What is the reason for the decline? It is not demographics. Although the Edison school is Sherman's poorest and most ethnically diverse school, its demographics did not change much after Edison took over. As shown in Table C1, the percentage of African-American and Hispanic students declined, and the percentage of students classified as economically disadvantaged also decreased slightly.

The percentage of students excluded from TAAS for special education reasons was approximately the same in math and reading in Edison's first year as in the year just before Edison took over. However, the percentage excluded was considerably higher in the second year (up from 2.2 percent to 8.4 percent in reading; up from 1.8 percent to 8.4 percent in math). The fact that this did not lead to higher test scores suggests that Edison students performed even more poorly than the numbers indicate. Edison excluded fewer students in writing than had been the case pre-Edison, which may explain some of the decrease in the grade 4 writing test.

Table C2 shows the percentage of Sherman students passing the TAAS reading, writing and math assessments from 1994-95, the year before Edison took over, through 1996-97, the last year for which data are currently available. And it compares the Edison figures with the school district and state percentages, as well as the percentage of students passing in the Texas control group.

In the spring of Edison's first year, the percentage of students who passed grade 3 reading fell from 88 percent to 67 percent and in math from 68 percent to 66 percent. Students in the control-group schools dropped 4 points in reading (compared with Edison's 22 points). And in the math assessment, the percent of control-group students who passed rose from 68 to 75.

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[22] The state of Texas matches each school with 100 other demographically comparable schools in the state. One would expect an Edison school to perform at the control-group average in order for the Edison program to show no negative effect.

In fourth grade at the Edison school, the reading pass rate improved from 50 to 56 percent, but math scores slid from 52 percent passing to only 34 percent. However, the control group of similar schools was less impressive in relation to Edison, at least in reading. Their reading scores declined (from 75 percent passing to 69 percent), though they still exceeded Sherman's 58 percent. The percentage of control group students passing math rose from 68 to 71 percent (compared to Edison's 18-point decline).

Table C1
Demographics of Edison School In Sherman, Texas

	Pre-Edison 1994-95	Edison 1995-96	Edison 1996-97
Black	20.5%	16.8%	18.3%
Hispanic	22.4%	21.8%	21.8%
White	57.7%	58.8%	59.2%
Economically Disadvantaged	70.1%	63.9%	65.5%
TAAS Exempted for Special Education			
Reading	2.2%	2.2%	8.4%
Writing	8.5%	1.7%	4.3%
Math	1.8%	1.5%	8.4%
TAAS Exempted for Limited-English Proficiency			
Reading	na	0.0%	5.0%
Writing	na	0.0%	0.0%
Math	na	0.0%	5.0%

Source: Campus Reports of *Academic Excellence Indicator System*, Division of Performance Reporting, Texas Education Agency.

(http://www.tea.state.tx.us/perfreport/aeis/97/campus.srch.html)

Table C2
TAAS-Percent Passing

	Pre-Edison 1994-95	Edison 1995-96	One-Year Change	Edison 1996-97	Two-Year Change
Third Grade TAAS					
District (Sherman)					
Reading	82.8	80.3	-2.5	81.5	-1.3
Math	74.3	70.1	-4.2	76.9	2.6
Texas Control Group					
Reading	78.8	75.0	-3.8	81.9	3.1
Math	68.5	75.3	6.8	85.0	16.5
State Average					
Reading	79.5	80.5	1.0	81.0	1.5
Math	73.3	76.7	3.4	81.0	7.7
Edison					
Reading	88.6	68.0	-21.9	69.5	-19.0
Math	68.2	66.2	-2.0	53.8	-14.4
Fourth Grade TAAS					
District (Sherman)					
Reading	78.6	77.5	-1.1	83.0	4.4
Writing	86.1	76.0	-10.1	81.8	-4.3
Math	68.1	66.8	-1.3	74.3	6.2
Texas Control Group					
Reading	75.6	69.4	-6.2	81.7	6.1
Writing	83.9	80.5	-3.4	86.7	2.8
Math	68.1	71.7	3.6	84.0	15.9
State Average					
Reading	79.0	78.3	-0.7	82.5	3.5
Writing	84.0	86.5	2.5	87.1	3.1
Math	70.0	78.5	8.5	82.6	12.6
Edison					
Reading	50.0	56.0	8.0	64.5	14.5
Writing	69.4	66.7	-0.7	53.2	-16.2
Math	52.0	34.0	-18.0	48.4	-3.6

Source: Campus Reports of *Academic Excellence Indicator System*, Division of Performance Reporting, Texas Education Agency. See Table C1 for Web citations

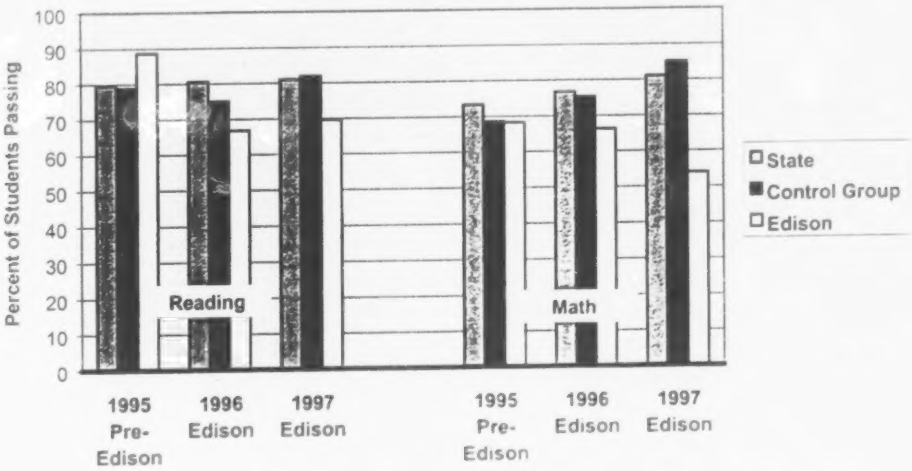


Figure C1 -- Percent of Third Grade Students Passing TAAS In Sherman Texas

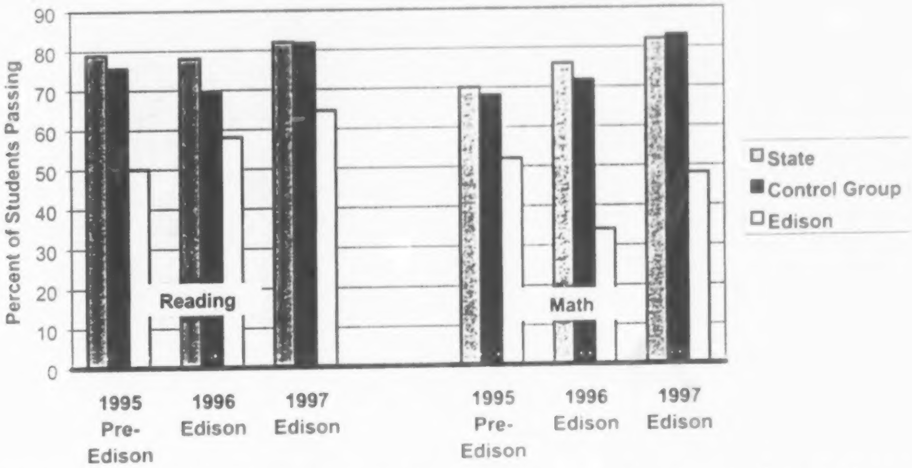


Figure C2 -- Percent of Fourth Grade Students Passing TAAS In Sherman Texas

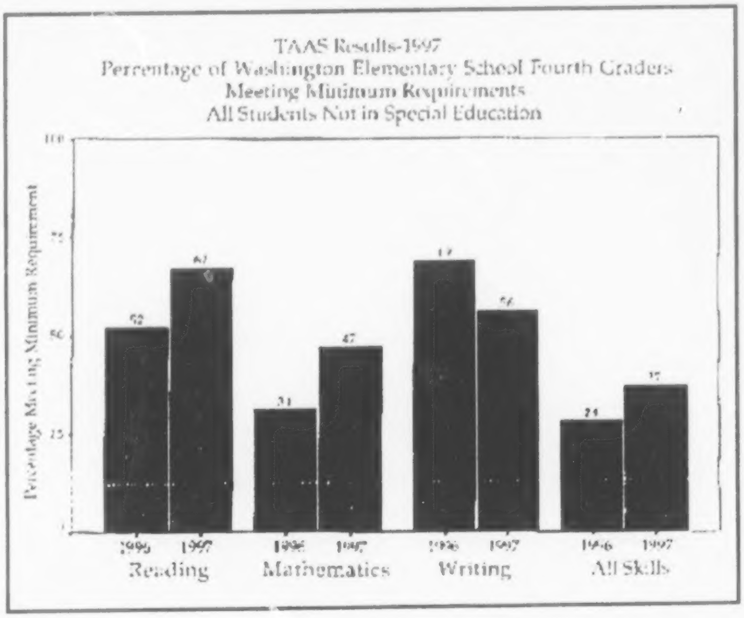
In Edison's second year, grade 3 reading improved just 2 points, and math dropped from 66 to 54 percent passing. In grade 4, reading improved again, and over two years, the percent passing increased from 58 percent to 65 percent. However, it is still 15 points below the control group average of 82 percent.

In math, Edison fourth graders also rebounded, but with a 48 percent satisfactory rating, it lags far behind the control group average of 84 percent. If students are followed diagonally from third grade in 1996 to fourth grade in 1997, the way Edison prefers to track test scores in most of its other schools, the percent of students passing reading decreased a little, from 68 to 64.5, while in math, the satisfactory rating slumped from 66 to 48 percent. The control group gained 7 points in reading and 12 points in math when 1997 grade four scores are compared with 1996 grade three scores (see table C2).

There are a number of possible explanations for Sherman's disappointing performance. Edison has said that school leadership is the problem. That could well be the case--it is as big a problem in many of this country's troubled schools as poor curriculum. And it is something that Edison will need to be able to deal with if it is going to demonstrate how to turn around low-performing schools.

Some details about staffing may also be significant. Although the number of students enrolled went up between Edison's first and second years, the number of teachers decreased, from 33 to 30; the number of aides decreased from 8 to 2; and the percentage of teachers with less than 5 years experience increased from 63 percent to 69 percent (compared to 30 percent elsewhere in the district [TEA, 1997]).

Exhibit C



Source: Edison Project handout

The state of Texas placed the Edison school on its list of low-performing schools for part of 1997 based on low performance of Hispanic students in math. Of nearly 6,000 schools in Texas, only about 70 are classified as low performing. (See http://www.tea.state.tx.us/accountability/rat97/ for details on the Texas Accountability Rating System. See Appendix (page 91) for more details about Sherman's status.)

D. Reeves Elementary School in Dade County

The contract between Edison and the Dade County school system calls for an evaluation conducted by the school system's Office of Educational Evaluation. At this writing, it is the only comprehensive evaluation of student achievement planned for any of the 13 schools Edison opened in its first two years of operation. Moreover, the research design is based on the kind of solid evaluation standards generally lacking with the Edison program.

The Stanford Achievement Test (SAT) and the Florida Writing Assessment are used as outcome measures, and the 1995-96 administration of the SAT, the spring before Edison began operation, will function as the baseline. Since students are not tested until they are in the first grade, the evaluation will deal only with grades two to five. For the same reason, the analysis will be limited to children who enrolled the first year of the program and were able to take the pretest the preceding spring.

Student achievement in the Edison school will be compared to achievement in "virtual schools" of comparable students. This control group, which has been selected in a way similar to the control groups for Edison's Primary Reading Studies in Wichita and Sherman, is a stratified random sample corresponding proportionally to the following student characteristics: grade level, ethnicity, eligibility for free or reduced-price lunch, and performance on the pretest.

Results of the first-year evaluation, which has not yet been released, are characterized, both by Edison (in its year-end report for 1996-97) and the author of the evaluation, as showing no difference between Edison and the control group in reading. In math, statistically significant differences favored the control group. The release of this evaluation, which was postponed from January 1998, will not take place until the spring of 1998, and no other details regarding student achievement are currently available.

E. Roosevelt Elementary in Colorado Springs

The Edison charter school in Colorado Springs was established in 1996 in close cooperation with the Colorado Springs school district. While enrolling some out-of-boundary students, Roosevelt is primarily a neighborhood school. All students in the Colorado school district, including those in the Edison school, are assessed using a series of tests, the District Achievement Level Tests (DALT), that have been created for the district. Because they are local tests, they do not have any national norms.

Table E1 compares results for Edison's first year with the results in Roosevelt for the preceding four years and the average of those four years. The first-year scores are lackluster when compared with scores from the year before Edison took over--these scores that would ordinarily be considered a baseline---and even less impressive when compared with the four-year average.

Table E1
Trends In Student Achievement At Roosevelt Elementary

	Gain From Fall to Spring				Average	Edison
	92-93	**93-94**	**94-95**	**95-96**	**92-96**	**96-97**
Subj/Grade						
Reading 3rd	6.6	7.1	10.7	5.0	**7.4**	**5.4**
Reading 4th	3.7	9.1	6.5	4.9	**6.1**	**2.5**
Reading 5th	1.3	4.7	4.6	3.6	**3.6**	**3.4**
Language 3rd	5.9	8.8	9.5	10.1	**8.6**	**5.7**
Language 4th	5.4	9.6	8.1	5.0	**7.0**	**6.4**
Language 5th	7.0	3.1	2.8	4.0	**4.2**	**5.2**
Math 3rd	11.3	9.8	9.3	8.9	**9.8**	**2.8**
Math 4th	8.1	8.7	7.0	8.6	**8.1**	**4.8**
Math 5th	6.1	8.3	4.8	3.4	**5.7**	**4.1**

Source: District data compiled by Colorado Springs Education Association.

At this point, however, the real story is Edison's presentation of the data so that Edison students appear to surpass pre-Edison students and even the district average. Since, as Table E2 shows, the pre-Edison school lagged behind the district in reading, language, and math in grades three, four, and five, moving ahead of the district average would be an impressive accomplishment--if it were true. Exhibit E shows what Edison is claiming in the way of improvement for its fourth graders. How can the figures look so different from those in Figure E1, which shows results for fourth grade reading and math?

Figure E1 -- Change In Student Achievement From Fall to Spring In Colorado Springs

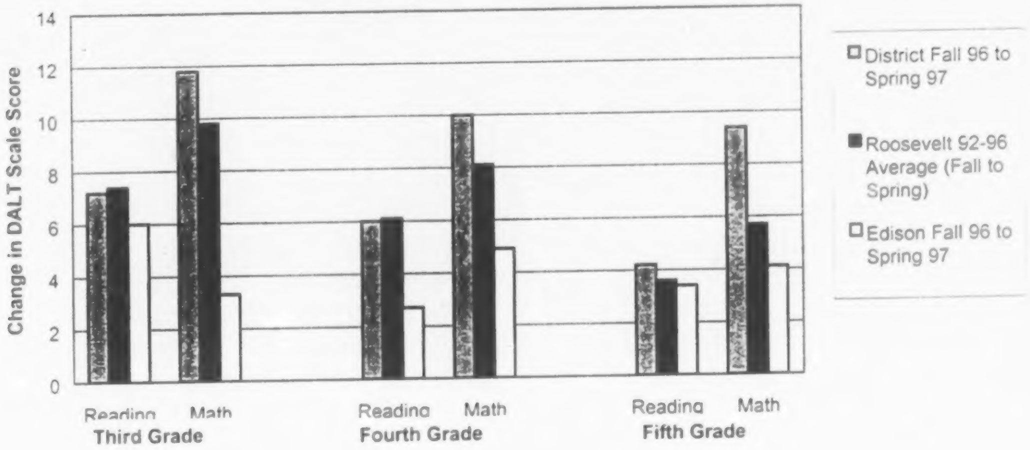
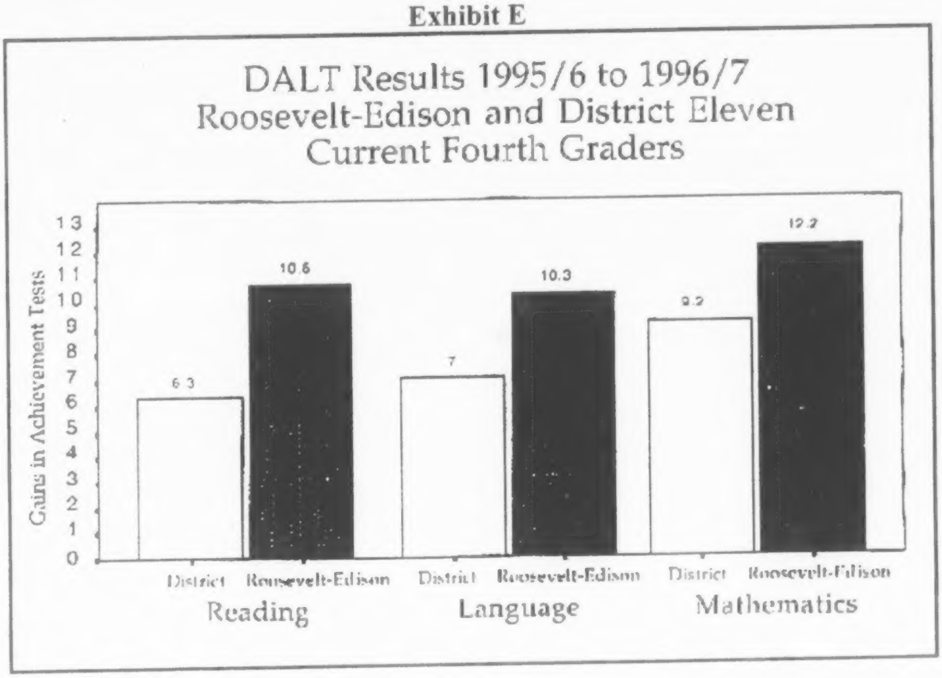


Exhibit E



Source: Edison Project handout

Schools in Colorado Springs test in the fall and then again in the spring, and their results are presented in terms of gains between the two tests. Thus, first-year results at Roosevelt would be the difference between scores in fall '95 and spring '96 (see Table E2). As already mentioned, Edison argues that these results do not capture the effect of their longer school year, and that is a legitimate complaint. Edison has dealt with the problem by negotiating both earlier fall and later spring test dates for 1997-98. For 1996-97, however, Edison has decided that the best way to present the data is from spring '96 to spring '97. And it is this decision that leads to most of the difference between the results shown in Figure E1 and Exhibit E.

Table E2
Different Ways to Compare Testing Data at Roosevelt

	Pre-Edison		Edison				Diagonal Movement (b)	
	Fall '95	Spg. '96	Fall '96	Spg. '97	Gain (c) Fall '95 to Spg. '96	Gain (c) Fall '96 Spg. '97	Gain (d) Spg. '96 Spg. '97	Gain (e) Spg. '96 Fall '96
READING								
Edison								
Third	182.4	187.4	184.2	190.1	5.0	6.0	a	a
Fourth	191.8	196.7	195.5	198.2	4.9	2.7	10.8	8.1
Fifth	198.7	202.3	201.4	204.8	3.6	3.4	8.1	4.7
District								
Third	191.4	198.8	191.1	198.3	7.4	7.2	a	a
Fourth	200.0	205.5	199.1	205.1	5.5	6.0	6.3	0.3
Fifth	206.5	209.9	206.1	210.3	3.4	4.2	4.8	0.6
LANGUAGE								
Edison								
Third	180.2	190.3	184.4	190.7	10.1	6.3	a	a
Fourth	195.2	200.2	194.2	200.6	5.0	6.4	10.3	3.9
Fifth	196.7	200.7	202.0	207.1	4.0	5.1	6.9	1.8
District								
Third	190.9	200.8	190.5	200.3	9.9	9.8	a	a
Fourth	201.3	208.1	200.9	207.8	6.8	6.9	7.0	0.1
Fifth	207.9	212.5	208.3	213.4	4.6	5.1	5.3	0.2
MATH								
Edison								
Third	175.4	184.3	177.7	181.0	8.9	3.3	a	a
Fourth	190.0	198.6	191.6	196.5	8.6	4.9	12.2	7.3
Fifth	199.2	202.6	200.6	204.7	3.4	4.1	6.1	2.0
District								
Third	185.9	198.3	185.1	196.9	12.4	11.8	a	a
Fourth	196.6	208.0	197.5	207.5	11.4	10.0	9.2	-0.8
Fifth	205.2	215.3	206.4	215.8	10.1	9.4	7.8	-1.6

a. Diagonal movement can only be calculated for students moving from grade 3 to grade 4 and grade 4 to grade 5.

b. Column entries for fall of grade 4 or grade 5 represent gains from spring of grade 3 or grade 4.

c. How school district measures student progress.

d. How Edison would like to compare student progress.

e. At Roosevelt, almost all of the changes from spring to fall reflect changes in the type of students.

While student achievement, over seven months from fall '96 to spring '97, increased by a score of 3 to 6 points in reading and 3 to 5 points in math (depending on grade level), May, June, and the summer vacation netted an additional 2 or 3 points in reading and 5 to 7 points in math (see Table E2). These are astonishing gains, even given Edison's longer school year--especially considering that spring to fall results are generally flat, as evident in the district averages in Table 2. The more likely explanation of the spring to fall jump is the change in student population: The percentage of students in the Edison school eligible for free or reduced-price lunch dropped from 54 in the spring before Edison took over to 44 in the fall of 1997, according to school district officials. In other words, a significant number of the students who entered and were tested in the fall were more advantaged. The Edison program apparently had little to do with the big jump in test scores--except insofar as it attracts higher scoring students.[23]

We can't know whether Edison realized that this way of presenting data is questionable, to say the least. But it seems like another example of the tendency to put the best face on things--even if that involves squeezing the truth-- that characterizes much of the data reporting in Edison's early schools.

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[23] When the fall 1997 DALT scores became available, Edison switched from the spring-to-spring comparison to a fall-to-fall comparison. The new comparison tells about the same story as the one described in Exhibit E (not much difference from district gains), and it also suffers from the same problem. Achievement gains over the summer are about as large as achievement gains during the school year. The AFT will incorporate the fall 1997 scores into this analysis when the spring 1998 data become available.

F. Boston Renaissance Charter School

Edison has made some pretty big claims about its school in Boston. For example, the company asserts that early tests showed two years' growth in just one year. On the Massachusetts Educational Assessment Program (MEAP) assessments in 1996, according to Edison, its charter school students exceeded the norms for comparable students by a wide margin in reading and science and by smaller margins in mathematics and social studies. However, the MEAP results are far less clear cut--and less favorable--than Edison indicates, and after two years, the whole picture of achievement at Edison's Boston charter is extremely confused. One reason is that Edison has used a number of different tests to assess student achievement, shifting from one to another, and on at least one occasion it used inappropriate tests and test norms. There is also a question about the percentage of students actually taking many of these tests. As a result, it is hard to get a coherent picture of student achievement at the school--and it is hard to see how Edison does.

1. 1996 state assessments. In April 1996, all Massachusetts fourth graders took a comprehensive battery of achievement tests covering reading, mathematics, science, and social studies known as the Massachusetts Educational Assessment Program (MEAP). Though Edison says that the students at its Boston charter school achieved outstanding results in these tests, several factors cast doubt on this claim. Comparing charter school and public school results in Massachusetts is very problematic because charter schools have more leeway in selecting students and in excluding them.[24] Perhaps more important, schools of choice attract especially motivated parents, and the effect of motivated parents on their children's achievement can be mistakenly attributed to the school. In any case, Edison seems to have exercised selectivity in the students it tested, as shown in Table F1.

Indeed, Edison's good results on the 1996 MEAP may have as much to do with which students did *not* take the test as with Edison's preparation of the students who did. Only 81 percent of Edison fourth graders took the MEAP, compared to the state average of 90 percent. One reason for the low participation rate is that only 27 percent of Edison special education students were tested, compared with 52 percent statewide. Since Edison apparently tries to limit special education children to those who can be taught mainly in regular classroom settings, its high exclusion rate is especially surprising. In addition, Edison test-takers did not include any LEP students. Of the remaining students--in other words the great majority--Edison tested only 90 percent, compared to the 97 percent state average.

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[24] The effect of this selectivity is evident in some facts about demographics at Edison's Boston and Worcester schools. Between its first and second years, the percentage of students in Edison's Boston charter school eligible for free or reduced-price lunch fell from 64 percent to 50 percent. In 1995-96, one-third of the school enrollment came from private schools. In Edison's Worcester school, nearly one-fifth of its students, who had originally been chosen by lottery, returned to Worcester public schools by mid-year.

Table F1
Number of Students Tested, 1996 Grade 4 MEAP

	Number Enrolled	Students Tested	Percentage Tested
State			
All Students	71,023	63,732	90%
Special Needs	9,749	5,068	52%
Limited English	2,666	1,655	62%
Other	58,608	57,011	97%
Rennaisance Charter School			
All Students	108	88	81%
Special Needs	15	4	27%
Limited English	0	0	0
Other	93	84	90%

Source: Massachusetts Department of Education

Testing fewer students, especially when they are special needs or LEP students, is likely to translate into an achievement advantage. The company also misstated the results when it claimed that scores at the Boston charter "exceeded the norms for comparable students by a wide margin in reading and science." According to the state of Massachusetts, test differences of less than 50 points are not significant. And the differences between Edison averages and the midpoint of the statistically constructed control group of comparable students were right around this 50-point difference except in reading, where the difference was 70 points (see Table F2). At best, the difference would be considered small.

Table F2
Edison's 1996 MEAP Compared to State and Comparison Band

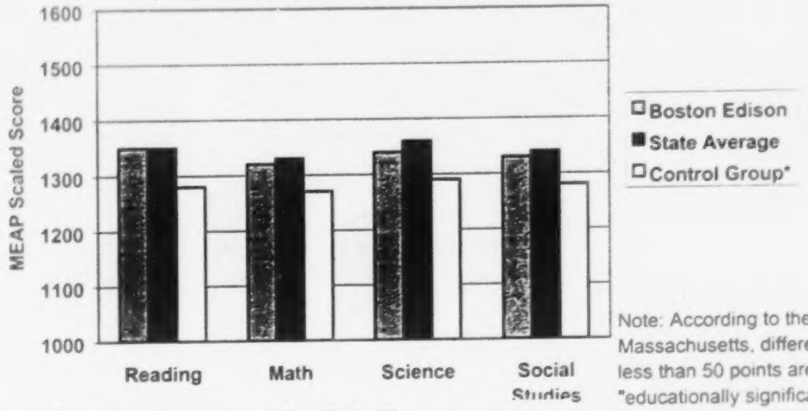
	Reading	Math	Science	Social Studies
Boston Edison	1350	1320	1340	1330
State Average	1350	1330	1360	1340
Comparison Band*	1240-1310	1240-1300	1280-1320	1250-1310
Midpoint	1280	1270	1300	1280

*Expected average score for BRCS based on regression with three variables: the percentage of students receiving free or reduced-priced lunch, family language background, and preschool experience.

The comparison score band was developed by the state (based on a statistical procedure called regression analysis) using three variables predictive of student achievement: (1) the percentage of students receiving free or reduced-priced lunch (self-reported by the principal), (2) family language background, and (3) the percentage of students who had attended preschool (self-reported by the students). At the grade 4 level, parental education is not part of the model. There are no statistical controls for the motivation and school involvement of parents.

An Edison bar graph, used in promoting the company's program, also exaggerates the Edison school's MEAP achievement by a creative use of scale (compare Figure F1 and Exhibit F1, which is the Edison promotional piece).

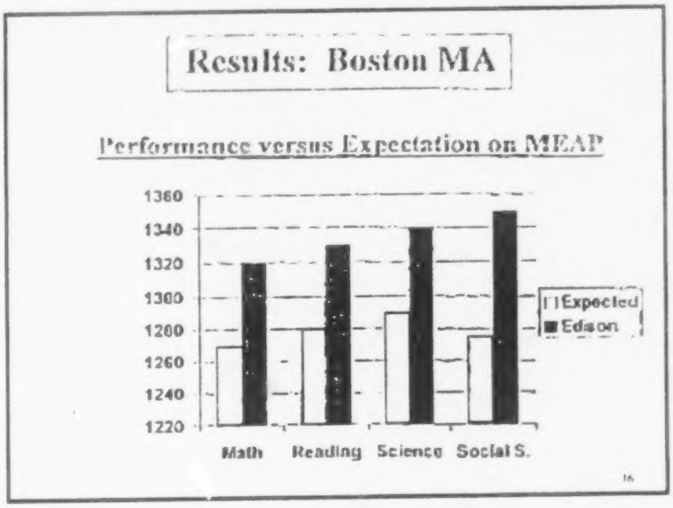
Figure F1 1996 MEAP Results for Boston-Edison, State Average and Control Group
(Graph with Scale Beginning at Minimum Score)



Note: According to the state of Massachusetts, differences of less than 50 points are not "educationally significant."

*Midpoint of comparison band (See Table F3)

Exhibit F1


Results: Boston MA

Performance versus Expectation on MEAP

This overhead, distributed by Edison, displays the same data as Figure F1 except by restricting the scale from 1,220 to 1,360, instead of from the scale score minimum of 1,000 to the scale score maximum of 1,600, the educationally marginal 50 point differences appear striking. In addition, the reading and social studies scores for Edison in this chart should be reversed with reading equal to 1,350 and social studies equal to 1,330.

2. Standardized testing. A confusing array of tests and testing dates at Edison's Boston charter school also makes it difficult to get a clear picture of student achievement (see Table F3). Edison uses two different standardized tests. The MAT/7 is given in the fall and provides data assessing Edison's first two years. The Stanford 9 is given in the spring. Some of the standardized tests indicate that students are making great progress. However, the exaggeration already evident in Edison's presentation of the 1996 MEAP results is also in evidence here.

Table F3
Standardized Testing at Boston Charter School

		Reading				Math			
		Grade 3	Grade 4	Grade 5	Grade 6	Grade 3	Grade 4	Grade 5	Grade 6
A. MAT/7									
Grade Equivalent									
Oct-95	MAT/7	2.7	3.2	4.8		2.0	2.3	4.2	
Oct-96	MAT/7 (a)	no data	4.5	5.0	7.6	no data	4.2	4.1	7.4
Oct-97	MAT/7	3.4	4.3	5.6	7.0	2.9	3.8	4.6	5.6
NCEs									
Oct-95	MAT/7	45	42	52		37	29	42	
Oct-96	MAT/7 (a)	no data	57	54	63	no data	53	40	64
Oct-97	MAT/7	55	52	54	53	50	47	48	42
B. Stanford/9									
Grade Equivalent									
Apr-96	Stanford	3.9	no data	6.9		4.0	no data	5.7	
Apr-97	Stanford (b)	no data	4.4	5.2	6.5	no data	4.3	5.2	6.0
NCEs									
Apr-96	Stanford	52	no data	56		54	no data	50	
C. Massachusetts Reading Assessment									
NCEs									
Apr-97	ITBS (c)	47	na	na		na	na	na	

Source: Detailed results from the test publishers provided by the Edison Project.

a. Grades 4 and 5 and 6 were given the grade 3, 4 and 5 test forms and scored using spring norms.

b. Derived from charts in the annual report to the Massachusetts charter school agency.
No data on number of students tested, and these data are not verified by test publisher data.

c. NCE based on percentile ranking of 45.

Edison made two claims of early success, the first legitimate and the second questionable. First, the spring 1996 Stanford/9 (panel B, Table F3) was compared to the MAT/7 given the previous fall when the school first opened (Panel A), and this indicated that students had progressed one-and-one half to two grade levels in one year.

Second, Edison claimed that its students made big gains on the MAT/7 between April 1996 and October 1996. For example, fifth-graders moving to sixth grade went from 6.9 grade equivalents in reading on Stanford the prior spring to 7.6 grade equivalents on the MAT/7 the next fall (second row of Table F3); and from 5.7 grade equivalents to 7.4 grade equivalents in math.

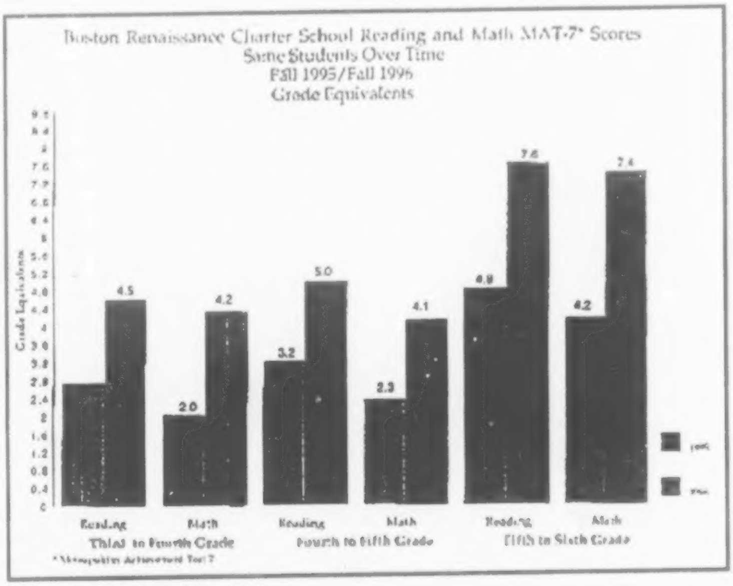
On the second point, the gain of almost two full years in only three months of school (May, June, and September), broken by summer vacation, is as surprising and implausible as the summertime gain in Colorado Springs (see page 69). However, the answer here seems to lie with testing irregularities rather than changes in the student population. In fall 1996, fourth-grade students were tested with the third-grade test using spring grade 3 norms, fifth graders were tested with the fourth-grade test using spring grade 4 norms, and sixth graders were tested with the fifth-grade test using spring grade 5 norms. In the Edison Project's (1997) Annual Report on School Performance, Edison argues, unconvincingly, that the grade equivalent data are legitimate, but not the NCE or percentile rankings.

There are also problems with the two-year success rate that Edison claims. Over two years, the MAT/7 tests show scores improving by about 10 NCEs in reading in grades 3, 4, and 5 and by larger amounts in math in grades 3 and 4. Most of the changes, however, seem to have occurred in the first year of the Edison program. Based on grade equivalents, as Edison suggests, and using the fall 1996 data, fourth and sixth grade showed declines in reading and in math in year 2. Grade five improved by half a grade equivalent in both math and reading.

Edison's progress in the second year of operation can also be measured by comparing the spring 1997 Stanford/9 to spring 1996 scores. These data indicate an achievement decline during Edison's second year. Edison has not been forthcoming with the spring 1997 Stanford testing data. Results were not published in their Annual Report on School Achievement, and the detailed data from the test publisher have not yet been provided to AFT. The 1997 information comes from charts submitted to the Massachusetts state chartering agency and provides information only in grade equivalents. In one year, students gained one-half a year or less as they moved from third grade in 1996 to fourth grade in 1997 and from fifth grade to sixth grade.

Exhibit F2

The fall 1996 administration of the MAT/7 makes Edison students look terrific, especially the sixth graders, who appeared to gain three grade equivalents in one year. However, testing irregularities in fall 1996 invalidate the results. Fourth-grade students were tested with the third-grade test using spring grade 3 norms, fifth graders were tested with the fourth-grade test using spring grade 4 norms, and sixth graders were tested with the fifth-grade test using spring grade 5 norms.



Source: Edison Project handout

Moreover, the issue of skewed results caused by excluding a significant number of students from testing, which came up with the 1996 MEAP, has continued to be a problem, as indicated by Table F4. Results for only about 75 to 85 percent of students are reported for any of these tests. This is a very low percentage, and it cannot be explained away by talking about special education students who are severely disabled. The student body at the Boston charter includes only 11 percent of special education students, and nearly all of them spend most of their time in regular classrooms. The apparent pattern of excluding a large percentage of students from testing cannot be generalized to all other Edison schools. In Mt. Clemens, where Edison runs its own standardized testing program, there were few exclusions in 1995 and 1996, though a high percentage were not tested in 1997. In Wichita in 1995, almost all students were tested. However, test exclusion is a pattern in Boston, and one that is likely to improve Edison's overall scores without necessarily indicating improved student achievement.

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Table F4
Students Tested at Boston Charter School

		Students				Percent Tested			
		Grade 3	Grade 4	Grade 5	Grade 6	Grade 3	Grade 4	Grade 5	Grade 6
Enrollment									
1995-96 (estimated)		112	112	112					
1996-97 (Apr 97)		114	112	113					
1997-98 (Jan 98)		105	113	118					
Students Tested In Reading									
Oct-95	MAT/7 (a)	92	83	83		82%	74%	74%	
Apr-96	Stanford	96		89		86%		79%	
Oct-96	MAT/7 (a)(b)		83	94	58		73%	84%	51%
Apr-97	ITBS	102				89%			
Oct-97	MAT/7	82	80	81		78%	71%	69%	

Source: Detailed results from the test publishers provided by the Edison Project.

On the other hand, given the 20 to 25 percent exclusion rate from testing, the math scores in grades 3 and 4 of 1995, which constitute the math baseline, are improbably low. Also surprising is the fact that they are lower than scores at the impoverished school run by Edison in Dade County, Florida, where 90 percent of students qualified for free or reduced-price lunch, in comparison to only 51 percent in the Boston Edison.

- The 1995 grade 3 math score of 37 NCEs compared with 40 NCEs in Dade County.

- The 1995 grade 4 math score of 29 NCEs is less than the 33 NCE level in Dade County.

We have no way of knowing why the Boston baseline scores were so poor, especially given the boost that excluding a relatively large number of students would give to the scores. However, there is no question that a lower baseline made the achievement of Edison students look stronger when they were tested the next year.

3. Massachusetts grade 3 reading test. The final test administered to students at Edison's Boston charter school for which we currently have data is the ITBS (Iowa Test of Basic Skills) reading test administered to third graders in spring 1997. It is part of the statewide assessment program that replaced MEAP in 1997. As Table F5 shows, only 6 percent of Edison students were not tested in this state-mandated and monitored exam, compared to the 20 or 25 percent when Edison admininstered its own test. Even then, Edison tests fewer students than the comparison districts. The comparison schools in Table F5 and Figure F2 are the same school districts used by Edison in their year-end performance reports. Chelsea was "taken over" by the state several years ago, and its educational and economic problems are well documented.

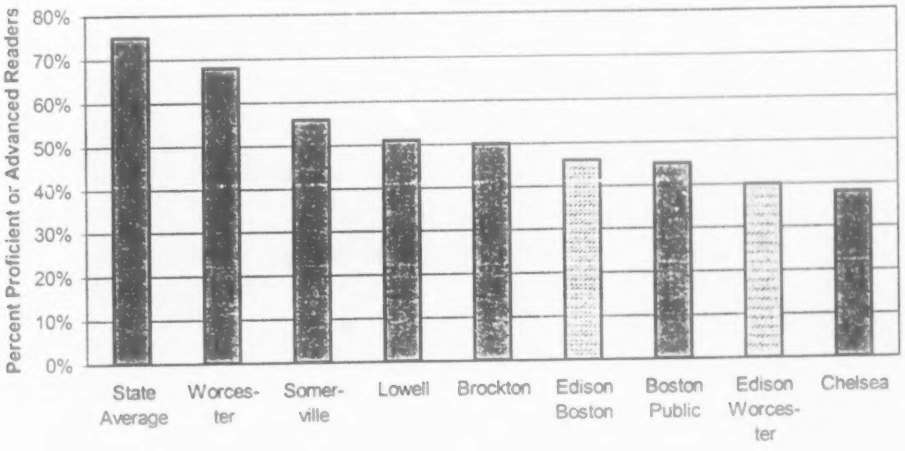
As for the test results, third graders scored at the 47-NCE level, compared to the Boston public school average of 43. However, they had not advanced beyond the level that they had already attained on the MAT/7 when the school first opened in fall 1995 (see Table B). While an NCE of 45 appears close to the national norms, the state average score was 55 NCEs.

Table F5
Massachusetts 1997 Third-Grade Reading Assessment

	Operating Educ. $/Pupil	Percent Non-White	Students Tested Under Routine Conditions (a) Absent For Test	National Norms %tile	National Norms NCE	Percent Pre-Readers	Percent Proficient or Advanced
State Average	5,468	22%	.	60	55	4%	75%
Edison-Boston	6,464	76%	6%	45	47	10%	46%
Boston Public	6,953	83%	5%	36	43	13%	45%
Chelsea	5,068	82%	1%	30	39	18%	38%
Somerville	5,959	40%	0%	46	48	10%	56%
Lowell	4,799	55%	3%	38	44	12%	51%
Brockton	4,983	51%	1%	39	44	13%	50%
Worcester	5,409	43%	1%	57	54	7%	68%
Edison-Worcester	na	48%	0%	40	45	18%	40%

(a) Many special education and LEP students are excluded from testing under "routine conditions."

Figure F2 Massachusetts 1997 Grade 3 Reading Test (ITBS)



Edison talks up student achievement in its Boston charter, and given some of the characteristics of its student body, in comparison with Edison's other schools and the Boston public schools serving similar students, you would expect it to make a good showing. Only about half of its students qualify for free or reduced-price lunch, and it has a lower percentage of special education students than schools in surrounding districts. Edison reports test results for many fewer students than urban school districts in Massachusetts or than other Edison schools. This, too, should give it an advantage. But despite these facts--and other miscellaneous attempts to make scores look better than they are-- once you make your way through the confusion of test scores, it turns out that Boston's Edison charter is about average. In fact, it is still achieving at about the level of other schools serving low-income students that are not participating in the Edison program.

VIII. First-Year Achievement in Edison Schools Opened in 1996

Based on the experience of its first four schools, which opened in 1995 (in Boston, Wichita, Mt. Clemens, and Sherman), Edison has argued that its students start off as low achievers, like those in most schools serving disadvantaged children. But after one year of the Edison program, students attain scores exceeding the national average. In fact, as this report has shown, results from Edison's first four schools are mixed and inconclusive. Some data support the Edison claim in Wichita and Boston, though not results from state assessments. And early results from the nine schools that Edison opened in 1996 are equally inconclusive.[25]

Only three of the new schools have fall baseline data: Wichita Junior Academy (MAT/7); and Colorado Springs (district tests); or pre-Edison baseline data (Dade County). So we will not be able to see where students from the other Edison schools were in terms of achievement when they entered the Edison program. However, spring assessments were given in the other schools, and the results offer a first look at student achievement under Edison and invite a comparison to the achievement in the four schools Edison opened in 1995.

In Colorado Springs, fall-to-spring improvement in the first year was less than the district's and less than when the Edison school was a traditional neighborhood school (see the discussion in Section VII above). Spring testing results for the other new elementary schools are shown in Table VIII-1, along with results for three of the first Edison schools. Results for middle schools in Worcester, Mt. Clemens, and Wichita are shown in Table VIII-2.

The two extremes are Lansing, where students are achieving at national norms, and Dade County, which has the lowest scores registered by any of the Edison schools (Table VIII-1). Mt. Clemens' sixth and seventh graders scored just above the 40th percentile in reading and just below the 40th percentile in math and language. Eighth graders scored lower. Students at the Worcester charter school scored around the 40th percentile in reading and language at most grade levels and in the 30th percentile range in math (Table VIII-2).

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[25] They are elementary schools in Colorado Springs (see section VI), Dade County, Fla. (see section VI), Worcester, Mass., and Lansing, Mich.; and middle schools in Boston, Mt. Clemens and Lansing, Mich., Wichita, and Sherman, Texas.

Table VIII-1
First-Year Achievement in Year-Two Elementary Schools Compared to Year-One Schools (Normal Curve Equivalents)

	Edison-Worcester			Dade County Stanford	Mid-Michigan MAT/7	Year-One Schools		
	Test	Date	NCE	Spring 97	Spring 97	Boston-Charter Stanford Apr-96	Wichita MAT/7 Oct-96	Mt. Clemens ITBS Dec-96
Reading								
Grade 3	ITBS	Apr-97	45					
Grade 3	Stanford	Jun-97	45	31	49	52	48	37
Grade 4	Stanford	Jun-97	43	31	49		49	39
Grade 5	MAT/7	Apr-97	43	35		56	55	46
Math								
Grade 3	Stanford	Jun-97	34	33	50	54	54	35
Grade 4	Stanford	Jun-97	37	40	48		51	41
Grade 5	MAT/7	Apr-97	43	38		50	58	33
Language								
Grade 3	Stanford	Jun-97	47		50	53		38
Grade 4	Stanford	Jun-97	39		49			41
Grade 5	MAT/7	Apr-97	43			54		45

Source: Data provided to the AFT by Edison Project.

Table VIII-2
First-Year Achievement In Worcester, Boston, Dade County and Mt. Clemens Middle Schools

	Edison-Worcester			Normal Curve Equivalents			
	Test	Date	NCE	Boston Stanford Jun-97	Mt. Clemens ITBS Apr-97	Wichita MAT/7 Oct-96	Wichita MAT/7 Oct-97
Reading							
Grade 6	MAT/7	Jun-97	39	53	46	51	52
Grade 7	MAT/7	Jun-97	46	45	48	45	50
Grade 8				41	35	46	47
Math							
Grade 6	MAT/7	Jun-97	32	42	40	43	43
Grade 7	MAT/7	Jun-97	43	34	43	45	46
Grade 8				38	34	44	43
Language							
Grade 6	MAT/7	Jun-97	41	no test	42	no test	no test
Grade 7	MAT/7	Jun-97	45	no test	43	no test	no test
Grade8			no test	no test	35	no test	no test

Source: Data provided to the AFT by Edison Project.

There is no apparent pattern to these variations in achievement, even in districts where Edison opened a second school in 1996. The Mt. Clemens middle school is doing better than the elementary school, which opened in 1995. The new Boston and Wichita schools are doing less well (cf. Tables VIII-1 and VIII-2). In the case of the Sherman middle school, questions about the student population make it difficult to be certain (see discussion below).

Edison's Wichita elementary school, which opened in 1995, is unquestionably its most successful school. In the fall of its second year (measuring about one year's progress), fifth graders scored above the national average, while third and fourth graders scored around the national average. However, students in Edison's Wichita middle school, for which we have two years of data, show no change in student achievement, which is more like that of the control schools.

The Edison middle school has spring Kansas state assessments in grade 7 reading and math (see Table VIII-3 and Figure VIII-1). It is essentially a neighborhood school, and the percentage of students qualifying for free or reduced-price lunch is only a fraction less than the pre-Edison school. Along with Edison, the control schools comprise the five poorest middle schools in Wichita.

The Edison school is below the state average in student achievement--as are the control schools (see Table VIII-3)--and somewhat below the district average. The spring 1997 scores for Hamilton, the poorest school, are similar to Edison's, except that Hamilton registered improvements in expository reading and math (see Figure VIII-1 and Table VIII-3). Whatever effect Edison's longer school year has will not be picked up in the 1997 comparison.

Figure VIII-1 Kansas State Grade 7 Expository Reading Test Trends At Jardine-Edison and Control Schools

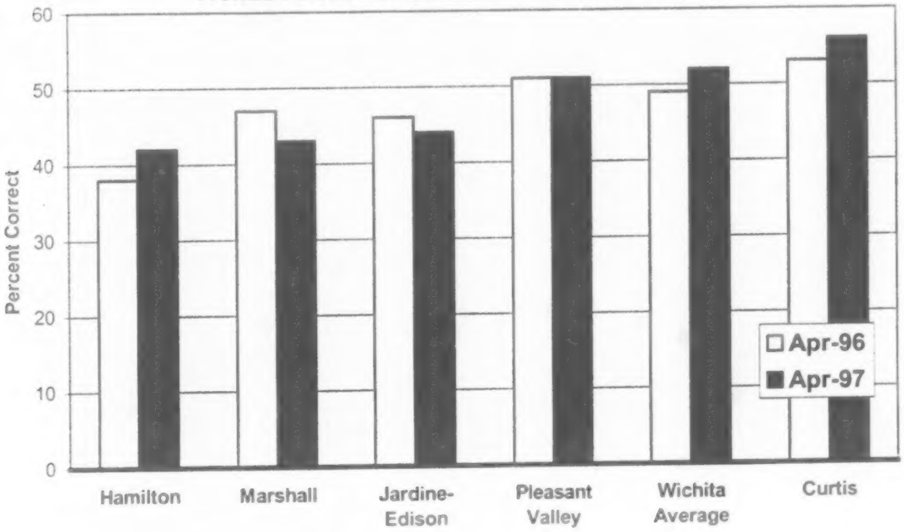


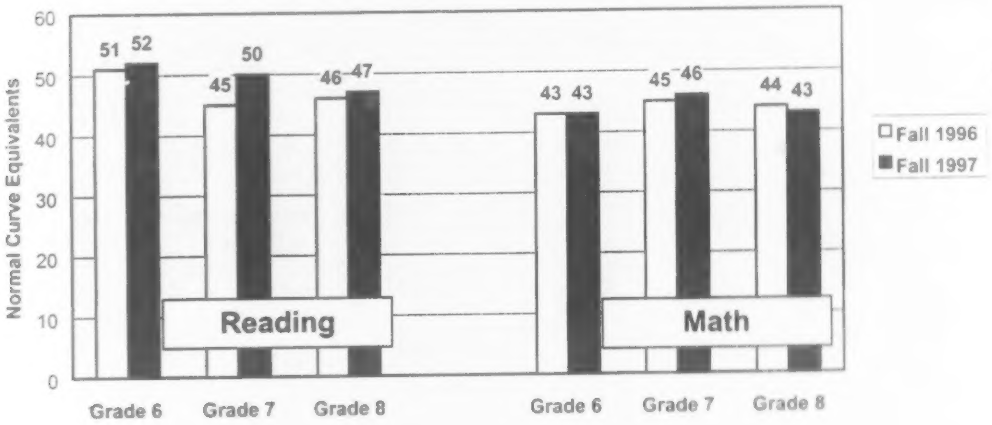
Table VIII-3
Grade 7 Kansas State Assessments at Jardine-Edison in Wichita

	State	Wichita	Jardine	Edison Jardine	Curtis	Hamilton	Marshall	Pleasant Valley
% White (95-96)			55%		49%	55%	41%	51%
% Free Lunch (95-96)			77%		53%	77%	63%	59%
% Free Lunch (97-98)				74%	63%	79%	68%	67%
Teachers/100 Pupils (95-96)		6.43	6.44	4.70	6.09	6.43	7.03	5.95
Grade 7 Expository Reading								
April, 1995	59	48	43		48	43	46	47
April, 1996	59	49	46		53	38	47	51
March, 1997		52		44	56	42	43	51
One-Year Change		*3*		*-2*	*3*	*4*	*-4*	*0*
Grade 7 Narrative Reading								
March, 1995	61	54	51		57	49	52	56
March, 1996		56		50	56	47	51	53
One-Year Change		2		-1	-1	-2	-1	-3
Grade 7 Math Power								
April, 1995	51	43	37		43	38	38	44
April, 1996	52	44	34		46	35	43	45
April, 1997		43		36	43	39	39	41
One-Year Change		*-1*		*2*	*-3*	*4*	*-4*	*-4*

Source: School reports on WPS Web page (http://www.feist.com/~wpsweb/), and information provided by school district officials.

In contrast to the success of Edison's elementary school on the MAT/7, the Edison middle school in Wichita showed no improvement in math and only a little in reading during its first year. The average reading improvement of 2.3 NCEs exceeded the district average increase and the increase in the four control schools (see Figure VIII-2 and Table VIII-4). In math, however, the district and all of the control schools had gains that exceeded Edison's. Overall, the changes at the Edison middle school, at the control schools, and in the district average were very small and essentially not different from each other.

Figure VIII-2 One Year of Progress in Math and Reading (MAT/7) at Jardine-Edison in Wichita



Source. Test publisher's data provided by the Edison Project

Table VIII-4
MAT/7 Standardized Achievement Test at Jardine-Edison in Wichita

	Wichita	Jardine	Edison Jardine	Curtis	Hamilton	Marshall	Pleasant Valley
% White (95-96)		55%		49%	55%	41%	51%
% Free Lunch (95-96)		77%		53%	77%	63%	59%
% Free Lunch (97-98)			74%	63%	79%	68%	67%
Teachers/100 Pupils (95-96)	6.43	6.44	na	6.09	6.43	7.03	5.95
MAT7 Reading (NCEs)							
Grades 6-8, Fall 1995	54.3	48.0		53.3	48.3	49.3	55.0
Grades 6-8, Fall 1996	53.3		47.3	52.7	44.3	48.7	52.7
Grades 6-8, Fall 1997	53.7		49.7	52.0	44.7	48.3	53.3
One-Year Change	***0.3***		***2.3***	***-0.7***	***0.3***	***-0.3***	***0.7***
MAT7 Math (NCEs)							
Grades 6-8, Fall 1995	48.7	43.7		47.3	41.3	42.0	50.0
Grades 6-8, Fall 1996	50.7		44.3	49.3	40.3	44.0	48.3
Grades 6-8, Fall 1997	52.3		44.3	50.7	41.3	46.7	51.0
One-Year Change	***1.7***		***0.0***	***1.3***	***1.0***	***2.7***	***2.7***

Source: School reports on WPS Web page (http://www.usd259.com/middle/middle.html), and information provided by school district officials.

Evaluating the achievement of Edison's middle school in Sherman, Texas, is a much bigger challenge. In 1995, Edison began operating the 460-student Washington elementary school in Sherman, Texas. One year later, Edison opened a school-within-a-school in the same district for grades 5 and 6. Edison's operation enrolls 300 of the 900 students in the school; and state records, including the accountability system, combine the records of Edison and non-Edison students.

The Sherman elementary school has not been a success so far, and Edison admits as much. However, the intermediate school was counted twice in the list of successes in Edison's Annual Report of School Performance for improvement in both fifth and sixth grade (http://www.edisonproject.com/annualframe.html). According to the report, "the comparisons show Edison with more significant gains than Sherman's traditional program in both reading and math in both fifth grade and sixth. This is a strong start indeed."

Edison's language implies both: 1) significant gains by Edison students, and 2) significant differences between Edison and traditional students. In fact, given the data we have, both of these claims are questionable at best.

The scores at Edison's middle school are based on the Texas Learning Index (TLI). TLI is not just a restatement of the TAAS. It is a standardized score based on the actual TAAS scores rather than the percent passing, which is how TAAS scores are usually rendered. It ranges from 0 to 100 and allows the comparison of different students in the same year or the comparison of different years for the same students. In other words, it allows student and school scores to be looked at in a number of different ways. An important peculiarity of the TLI is that it does not include students who score above 84 because of a so-called ceiling effect.

The definition of significance that Edison employs in dubbing its Sherman middle school a success does not involve comparing average scores or gains over the course of the year, as would be quite possible, given the way TLI is set up. Instead, it depends on a "difference in percentage proficient scores of 5 percentage points or more." Edison's figures go as follows:

- 33 percent of Edison fifth graders improved their TLI in reading by 5 points, compared with 25 percent of the traditional students; and 36 percent of Edison fifth graders improved by 5 points in math compared to 25 percent of the traditional students.

- 45 percent of Edison sixth graders improved their TLI in reading by 5 points compared with 39 percent of other students; and 47 percent improved by 5 points in math compared to 36 percent of traditional students.

The figures meet Edison's own criterion. However, given the nature of the TLI, as well as the Texas state figures about Dillingham, there are some unanswered questions.

According to the state of Texas, only 63 percent of the Dillingham fifth and sixth graders (Edison and traditional students combined) increased their TLI reading scores by 5 or more points and 49 percent increased their TLI math score by at least 5 points (http://www.tea.state.tx.us/perfreport/ci/97/group.srch.html). These figures don't track with the Edison figures, and they seem much lower. Furthermore, in the 900-student school (both Edison and traditional students) the TLI included only 316 students in reading and 437 students in math. Did Edison include some Edison students who scored above the cutoff of 84 in computing its five-point gains? We can't tell.

The ceiling effect is likely to have a much bigger impact on traditional students because they have, on average, higher scores than the Edison students. Based on the spring 1997 TAAS scores that the company provided to the AFT and the data for the entire 900-student school obtained from the Internet (http://www.tea.state.tx.us/perfreport/aeis/97/campus.srch.html). Edison students are performing well below traditional students in reading and math:

- Edison fifth-grade students averaged a TAAS passing score of 78 percent, compared to 91 percent for traditional students.
- In math, they averaged a 71 percent pass rate, compared to an 89 percent for traditional students.
- In sixth-grade reading, the pass rate for Edison students was 82 percent, compared to 93 percent for traditional students.
- Based on improvement, the entire student body of 900 ranked in the top quartile in the state in 1996-97.

Did Edison get the favorable improvement rates for Edison students because the ceiling effect eliminated a number of higher-scoring traditional students? Again, we don't know because Edison's figures are unconnected to any of the other test data available through the TLI.

In order for Edison to claim its Sherman middle school as a success, it needs to provide demographic and student achievement data on its own 300 students and the 600 students in the traditional part of the school. The TLI data should be presented using the same rules that the state accountability system uses to account for the ceiling effect. Ideally, 300 similar students from the traditional school could be selected as a control group. Student achievement gains (or declines) need to be calculated for both years. The analysis presented in this section, while more extensive and accurate than Edison's, is certainly incomplete, but it suggests that Edison students are lagging behind in math and reading.

There is no reason why we should be able to generalize about student achievement in the schools Edison opened in 1996. Looking at the record, the most we can say with certainty is that some schools do better than others--which suggests that schools are anything but turnkey operations. And Edison's program, like any other, depends on the people who have to carry it out. If school districts expect magic, they are going to be disappointed.

Recommendations

As one might expect at this early stage in the history of the Edison Project, the evidence on student achievement is mixed and inconclusive. However, two things are clear. There are discrepancies between the record of Edison schools, as measured by standard methods of educational evaluation, and the company's sales presentations and promotional materials. Edison has exaggerated test score gains and emphasized favorable comparisons to show Edison schools in the most positive light. In fact, if public schools were to use some of Edison's evaluation methods and modes of presenting data, they would look a lot better, too.

This is unacceptable. Edison should be expected to measure achievement in its schools using the same standards that apply to other schools in the districts where the company operates. Despite its claims to being a better alternative to regular public schools and a model for public education, Edison is obviously confronting the same difficulties in improving student achievement as regular public schools.

Although accountability for the outcomes of private management of a public institution, like a school, rests with the private provider, the ultimate responsibility is with public officials whose duty it is to protect the public interest. Private management of public schools requires good public oversight, both before entering into an agreement with a private provider and during it. To that end, there are a number of things school districts that are considering hiring the Edison Project should keep in mind:

- Improving student achievement is at the heart of all the many efforts to improve U.S. education, including Edison's. So school districts should pay at least as much attention to Edison's student achievement data as they do to impressions from site visits to Edison schools.

- School districts should have their own experts--*district* officials in charge of program evaluation and student assessment--review and verify all student achievement data in all of the Edison schools. This review should be made public and should include not only Edison-administered achievement tests but also state and local assessments.

- School districts considering hiring Edison should have a timeline that is unhurried enough so that everyone involved can give careful attention to the advantages and disadvantages of Edison before making a decision.

- If a school district decides to sign a contract with Edison, officials should either hire independent professional evaluators or conduct their own annual evaluation of program implementation and student achievement using qualified school-district employees.

In her article about Edison's Boston charter school, which appeared in the March 1998 issue of *Phi Delta Kappan,* Peggy Farber puts the Edison Project into its perspective as a business venture and as one struggling school reform project among many. She directs her caveats to members of the media, but they are equally applicable to school districts:

> It is not reasonable to expect the Edison Project to present the public--its potential customers--with a truly comprehensive, objective picture of its schools. Edison officials are naturally eager to draw attention to signs of success, which clearly exist. But it is essential, especially now, when the idea of a single solution to complex social problems has such a strong grip on the American imagination, that reporters give an honest and thorough accounting of what it's like inside schools that operate beyond the reach of almost all local and state agencies. The evidence from Boston Renaissance suggests that the Edison Project is struggling--succeeding in some areas, stumbling in others--to improve schools for students. And the same can be said for countless reform efforts across the country.

To a large extent, Edison's popularity depends on the perception that public schools are dysfunctional and helpless to change and that anyone with a fix to offer must be able to do better. Before buying into this idea, public officials and the people who report and comment on education should look at some of the reform efforts that are demonstrably--that is, using accepted measures --changing public schools for the better. This report has had occasion to comment on one of them--Success for All--and to point out that, thus far, Edison students who are following the SFA program are not doing as well as SFA students in non-Edison schools where SFA is fully implemented. This is true despite the fact that Edison students are generally more advantaged and have the benefit of the rest of the Edison program.

The point is that Edison is one reform effort among many. Its more polished public relations have ensured it a national reputation, and since it is a for-profit business, it also has more money behind it. Will the Edison Project be able to live up to its promises? We'll have to wait and see. In the meantime, there are unheralded programs that are already living up to their claims, and people who are looking for ideas--or good news about education--should be giving them the same kind of attention that Edison gets.

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Appendix: Sherman's Status as a Low-Performing School

The state of Texas placed the Edison school on its list of low-performing schools for part of 1997 due to the low performance of its Hispanic students on the math part of TAAS. Of nearly 6,000 schools in Texas, only about 70 are classified as low performing. (See http://www.tea.state.tx.us/accountability/rat97/ for details of the Texas Accountability Rating System.) The school was removed from this list when seven Hispanic third graders were labeled as limited-English-proficient well after the test was taken. The action resulted in an exemption of all of Sherman's Hispanic students from the state's accountability plan.

Among the criteria by which schools can be classified as low performing are pass rates below 35 percent on any TAAS test in any one of four categories of students: 1) white, 2) African-American, 3) Hispanic, or 4) economically disadvantaged. However, 30 students must be in each category for the score to count. Table C3 shows pass rates for three categories of students in June 1997.

Table C3
TAAS Passing Rate by Category of Student
Edison School in Sherman

	Hispanic			African-American			Economically Disadvantaged		
	94-95	95-96	96-97	94-95	95-96	96-97	94-95	95-96	96-97
Grade 3									
Reading	78%	41%	50%	100%	84%	50%	83%	61%	65%
Math	69%	56%	14%	71%	46%	39%	62%	65%	55%
# Tested			14			10			49
Grade 4									
Reading	50%	33%	59%	11%	55%	33%	50%	53%	66%
Math	50%	33%	41%	44%	60%	25%	57%	27%	48%
Writing	70%	38%	59%	50%	60%	55%	83%	60%	46%
# Tested			17			9			44
# Tested (Gr. 3 & 4)			31			19			93

Source: Campus Reports of *Academic Excellence Indicator System*, Division of Performance Reporting, Texas Education Agency.

The 14 percent pass rate in third grade math in 1996-97 is attention getting. It contrasts sharply with the 50 percent pass rate in reading (one would normally expect LEP students to do better in math than in reading) and the math passing rate from the prior year of 56 percent. The 31 Hispanic students (14 in third grade and 17 in fourth grade) had an average passing rate of 29 percent (14 percent in third grade and 41 percent in fourth grade). As a result of falling below the 35 percent standard in the area of "Hispanic math," the Edison school was put on the low-performing schools list. When the seven Hispanic students were subsequently exempted from the accountability criteria, dropping total Hispanic students with countable test scores to 24, Edison was removed from the list. As noted above, low performance of Hispanic students only counts under the Texas Accountability Rating system if at least 30 Hispanic students are tested.